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Columbia University Quarterly

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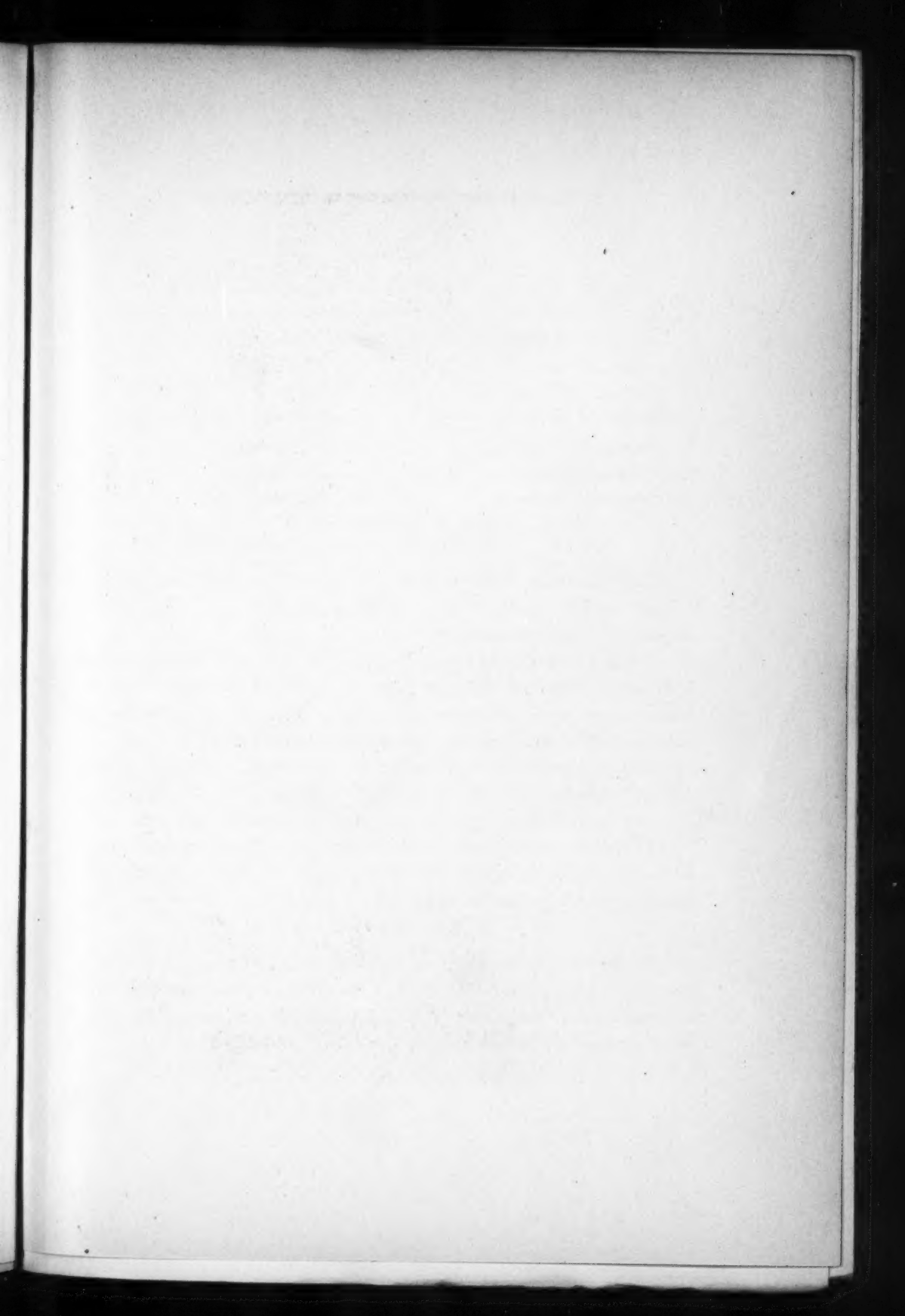
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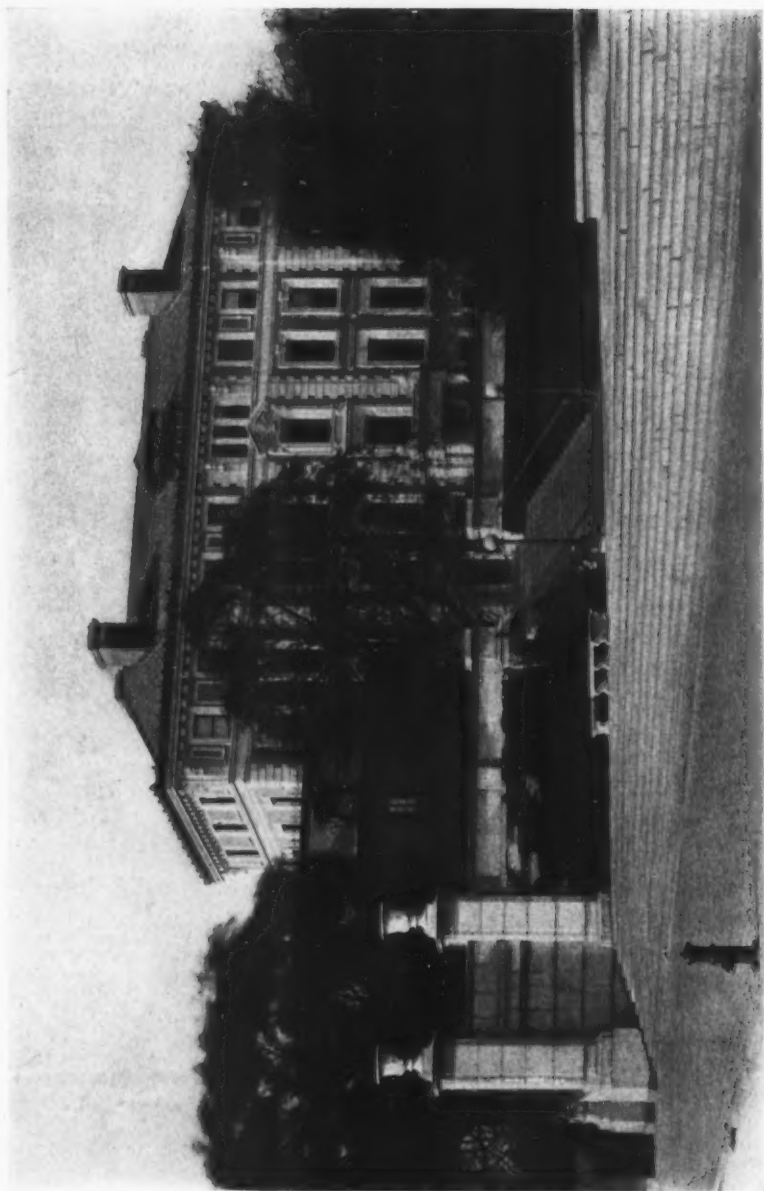
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The magazine aims to represent faithfully all the varied interests of the University. It publishes historical and biographical articles of interest to Columbia men, shows the development of the institution in every direction, records all official action, describes the work of teachers and students in the various departments, reports the more important incidents of undergraduate life, notes the successes of alumni in all fields of activity, and furnishes an opportunity for the presentation and discussion of University problems.

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UNIVERSITY QUARTERLY

VOL. VIII—JUNE, 1906—No. 3

THE SCHOOL OF ARCHITECTURE

THE recent establishment of the faculty of fine arts of Columbia University is the crowning step in a series of developments which began several years ago and which have, to a certain extent at least, centered about the school of architecture. The first step in the series was the action taken by the Trustees in May, 1902, in setting apart the school of architecture from the faculty of applied science, of which it had been a part since its foundation in 1880, and separating the department of music from the faculty of philosophy, under which it had been established in 1897. These departments thus detached from their original affiliations with applied science and philosophy, respectively, were to serve—as was announced at the time of the separation—as a nucleus for a future faculty and school of fine arts.

But the separation of the school of architecture from the faculty of fine arts was in itself merely the culmination of a process of evolution which had begun in the earliest years of the history of the school. It was originally attached to the faculty of applied science (or as it was then called, the school of mines of Columbia University) not because architecture was in itself regarded as merely an applied science, but simply as a matter of administrative convenience. The proportion of scientific and mathematical branches entering into the training of the architect was sufficiently large to

make it desirable to attach the new school to the faculty which taught these subjects. One consequence of this attachment was, however, that the architects were obliged to conform to regulations and to an educational conception which were not based primarily on the needs of the architectural profession and which had small sympathy with the artistic point of view and artistic ideals. The first year of the course, for example, was entirely devoted to mathematical and scientific studies, more or less elementary, it is true, but having no direct relation to the profession which the student intended to enter. Some of these courses were actually duplications in part of other courses, and the time which should have been given to elementary training in draftsmanship and design was thus sacrificed to a wasteful and ill-considered study of sciences of little use to the architect.

Professor W. R. Ware had brought from the Massachusetts Institute of Technology, in which he had founded and developed the first American school of architecture, a clear conception of what the academic training of the architect should comprise and an earnest purpose to realize this conception in the new school at Columbia College. With great patience and perseverance he labored year after year to persuade the faculty of the school of mines to disburden the courses in the department of architecture of these irrelevant and hampering studies. It is not necessary here to recount the steps of the long process by which his ideals were at last realized. Throughout this evolution the artistic and educational import of the architect's training was kept steadily in view and the time available for drawing and design—the crowning activities of the architect, to which all else is subsidiary—was year by year increased. When, therefore, the school of architecture was set off from the faculty of applied science, it has already become a school of art, and the act of separation was merely the logical consummation and official recognition of actual facts. Now that it has at last taken its place officially as a school under a fine arts faculty, it seems fitting to review at some length those changes in organization and detail which have taken place since the act of separation.

It is highly important in the first place to emphasize the fact that the school in its present status, and in spite of all adminis-

trative changes, still remains the embodiment of the ideals which Professor Ware cherished and to which he gave repeated expression through the whole of his long incumbency of the professorship of architecture. He always believed and insisted that the architect should be a man of culture; an artist, of course, but not a bohemian; a representative of the highest and broadest professional culture, whose outlook upon the world should be that of the man of liberal education and not of the narrow specialist. Professor Ware never decried or belittled scientific training, but he always insisted that the office was the proper school for a large part of the technical discipline required by the architect, and that with such a preparation in physics and chemistry as was exacted for entrance to this school, the student was sufficiently equipped on the scientific side to pursue the study of construction and building materials as far as was necessary. The function of the course of study in the university was, therefore, to fit the future architect not so much for the immediate requirements of his office-employer on graduation, as for the larger requirements of the architect's own practice five or ten years later. Within these years he could easily make up whatever details of office experience were lacking when he graduated; but he would never be likely to make up in the office for any lack in liberal training, in breadth of view and in refinement of taste. Professor Ware always contended that the course in architecture was in its general character in reality a graduate course, and he encouraged in every possible way the entrance of university graduates as students in the school. The new provision, which requires as a condition of admission to the course leading to the degree of bachelor of architecture the equivalent of two years of collegiate study, is therefore the realization of a conception which existed years ago in the mind of the founder of the school, and in which he always had the full sympathy of his subordinates on its staff. And it is furthermore interesting to note that in all the changes which have taken place in the school, not a subject which Professor Ware introduced into its curriculum has been dropped nor has any new branch of study been added to the list. There have been changes in the relative proportions of the different courses and in the methods of their administration; but

the subjects which he had fixed upon as essential still remain as evidences of his far-seeing wisdom and breadth of view.

Professor Ware retired from his professorship in 1902. During the four years that have passed since then there has been a constant effort to supplement the liberalizing developments which specially distinguished his administration by a broadening and strengthening of the student's training along artistic and professional lines, and especially in drawing and design.

In working out this problem, the authorities of the school have found themselves between two cross-fires: on one hand from those who are constantly urging a greater emphasis upon technical practice and the scientific side of the profession, and on the other from those who, having received their training in the school of fine arts at Paris, have insisted that the methods of that school alone offer the final solution. It has, however, been clear from the first that, while there are many things to be learned and some things to be imitated in the Paris methods, our own conditions are so widely different from those prevailing in France that even in adopting what is worthy of imitation it is very important to adapt and adjust, to modify and recast the details to fit them to the special environment of this school.

The first of the more important of the measures finally carried into execution was the abolition of the traditional four years' duration of the course of study. This change, which Professor Ware had long desired to bring about, has been effected by a fundamental change in the statement of the requirements for graduation. The curriculum is no longer arranged by years or classes, and the division of the school into classes, therefore, has disappeared. In certain departments there is a necessary sequence of courses, as in the mathematics and design, while in others the precise order of the different divisions is of small moment. The requirements in each course are stated in "points," proportioned more or less closely to the number of hours required by the course. When a student has passed his examinations or satisfied the requirements in each branch, he is credited with the corresponding number of points, and receives his degree or certificate when the total number of points required has been registered. Each student is free to select and group the

courses according to his own capacity and convenience, provided only that he take sequent studies in the prescribed order. One student may thus complete all the requirements in three years, while another may take five or six years to reach the same goal. The man who works slowly and the man who cannot command all his time will therefore prefer to take a longer period in which to complete the course; while the quick and ambitious student who comes with a thorough preparation has every inducement to shorten his period of study.

The second of these new measures was the introduction of what is commonly called the "atelier system." One great difficulty with the teaching of design as it is often conducted in American schools of architecture, has been that of falling into narrow ruts, through subjection to the domination of the taste and ideas of a single instructor. With this danger there has also generally been associated a lack of artistic enthusiasm, due to the absence of comradeship and friendly emulation among the students. A further drawback has been the practice of requiring deficient work to be made up either during the college year or in the vacation following. "Back work" has hung like a millstone about the neck of many a student, impeding his efforts and quenching all his enthusiasm. The deadening influence of the "passing mark of 6" has helped to kill whatever enthusiasm might otherwise have survived. So long as each design was accorded the minimum mark of "6" the student had met the requirements and could receive his degree. The whole tendency of this system was to bring down the average of the work to this lowest level and to prevent the development of strongly individual work of a high grade. The "atelier system" sweeps away these disadvantages at a stroke. Instead of maintaining a single drafting-room for all its students, the University maintains three, two of these down-town and the third in Havemeyer Hall. These studios have each a director and an associate director or assistant. Mr. Charles F. McKim assumes the directorship of one of these rooms and Mr. Thomas Hastings of another. Mr. W. A. Delano directs the one at Havemeyer Hall. Students of the three rooms are thus brought directly into contact with three architects of experience and distinction, two of them standing in the foremost ranks of the pro-

fession. Their assistants, Mr. J. R. Pope, Jr., Mr. J. V. van Pelt and Mr. A. H. Gumaer, are responsible for the more immediate and detailed oversight of the work. The preparation of the entire schedule of the work in design, the formulation of the programs for the different problems and the arrangement of all the administrative details of the work are handled by a sub-committee representing each of the three ateliers or drafting-rooms. The preliminary sketches for the designs are all made on certain fixed days at the University. The designs are worked out in the several drafting-rooms under the various instructors and are all handed in upon a fixed day and hour to an attendant in Havemeyer Hall. At another fixed date these designs, having been properly mounted on stretchers and hung on the walls of the Model House for exhibition, are judged by a jury consisting of representatives of each atelier and two or three practising architects chosen from a special annual jury list. The jury awards "passes," "mentions" and "special mentions," which count respectively for various numbers of points or credits which are registered for those who receive these awards. Designs which do not conform to the standard set by the jury receive no awards and register no credits. The number of credits required for a year's work is such as can be obtained by a "pass" in each of the designs given out during the year in the given grade. The student, therefore, who fails of an award on one design, instead of being hampered during the next problem by trying to make up a delinquent design is spurred on to more earnest effort to do better work, in order that by winning a higher award on the next one or two problems he may make up the points he has lost by his failure. Thus the stimulus is always towards a higher achievement, towards more earnest and unremitting labor. The deadly incubus of the "passing mark of 6" and the millstone of "back work" no longer exist. But this is not all. The "atelier system" introduces an entirely new spirit of friendly emulation among the students. The members of each drafting-room seek to win points not only for their own advantage but for the reputation of their studio. Each studio is organized as a little republic and a strong *esprit de corps* is developed. The instructors themselves feel their responsibility alike to the students and to the atelier itself, and work with a delightful enthus-

iasm and devotion. A new spirit has crept into the work of the school and it has thus far developed nothing of the bitterness and jealousies which have sometimes been evident in Paris. This is due to the fact that the jury is a constantly changing body, with a large percentage of outsiders. There is, therefore, no danger of the judgments being unfairly swung into a given direction by the dominance of any one atelier, as is alleged to have been the case not infrequently in Paris, and the students are not misled into the effort to capture the favor of the dominant influence by sacrificing fundamental artistic merit to special tricks or devices of design. As there are no medals or prizes other than the registration of the points awarded, there is no more danger of personal jealousies than with the former system of percentage marks. The students in general accept the verdicts of the jury in a most reasonable spirit; and the impersonal and irrevocable character of the verdicts removes all possibility of personal pressure or the appeal to an instructor's good nature to secure a higher mark or less exacting judgment. After each judgment the several instructors are accustomed to rehearse to their students the considerations that prevailed in making the awards, so that the judgment has a double educational function.

The principle of requirements by points has also been extended to the drawing, to which there is a larger assignment of hours per week in each grade than was formerly the case. The advanced drawing from the antique and from the nude figure has been for the last few years in the hands of Mr. Francis C. Jones, the well-known artist, who conducts a special class for the students of this school at the National Academy of Design. This class, it should be known, was the first practical step towards the affiliation recently consummated between the National Academy and Columbia University. All the drawing leading up to this advanced work, formerly divided between several instructors, has now been consolidated in the hands of Mr. C. A. Harriman, who carries the student through a progressive series of exercises, occupying usually six hours a week for about three years, in pencil drawing from the flat copy and the cast, isometric projections, freehand wash-drawings, architectural water-colors, pen-drawing and drawing from the cast in charcoal, so that the graduate of the school is fairly well prepared in at least the fun-

damentals of all the chief forms and processes of artistic delineation. A course of training in modeling under Mr. E. R. Smith of the Avery Library, himself a trained sculptor, supplements this extended course in drawing.

The third and most revolutionary step in the recent development of the school was the change in the requirements for admission to the course for the bachelor's degree, which goes into effect with the beginning of the coming academic year. Hereafter the candidate for admission to this curriculum must offer evidence of the satisfactory completion of two years of study, not architectural, in some recognized college or scientific school. It is intended, in other words, that the bachelor's degree in architecture shall represent a certain minimum of liberal education in addition to the strictly professional discipline offered by the school. This professional training is to be regarded as a graduate course, on a par with the training exacted in theology or medicine. The architect who receives the stamp of the University diploma should be a man of broader culture, of wider views, than any purely technical curriculum can impart: for architecture, by reason of its relations with many diverse fields of knowledge, its contact with so many different points of life and culture, and the peculiar and personal relations of architect and client, belongs with the learned or liberal professions. Professor Ware always contended that his students were in a class apart from those in the college; he sought in every way to inspire them with the ambitions and to impart to them a regard for the standards, of a mature body of graduate students. He succeeded only in part, because so many of them came to the school directly from the secondary school, and were neither mature nor graduate students. The new departure thus makes possible what was impossible before, and sets the architectural profession more nearly upon the level it ought to occupy.

When this radical innovation was decided upon, it was suggested that provision should also be made for receiving and recognizing students of a predominantly artistic temperament, who have lacked the opportunity for such liberal and scientific training as was to be required for admission to the course for the degree. This was accomplished — the fourth important measure in advance — by es-

tablishing a new curriculum, leading to a new form of university recognition — the professional Certificate of Proficiency. For admission to this curriculum the requirements were made such as any intelligent secondary school graduate could meet, by supplementing his school-training by a moderate amount of training in drawing and the elements of architecture. Ten points acquired in the entrance examinations suffice for admission to this course, supplemented by evidence of proficiency in the elements of architectural and freehand drawing. The curriculum covers all the subjects included in the requirements for the degree except the mathematics and engineering, in the place of which a course in structural design is offered, based on graphical processes and the elementary mathematics required for admission. A graduate in this course should be in all respects a competent practitioner, qualified for the general practice of architecture, though not competent himself to solve the more difficult problems of engineering design, for which the holders of the bachelor's degree have been trained. About half of the students who matriculated in 1905 are candidates for the certificate. At the same time that the Trustees provided in this manner for the student unable to offer two years of collegiate study for admission to the school, they further offered encouragement to such students by providing that candidates for the certificate who give evidence of distinguished and unusual ability in their work may, by vote of the faculty, be promoted into the course leading to the degree, without making up the deficient entrance requirements: a prize of merit of a sort to stimulate ambitious and gifted students to the highest effort.

The school has for many years admitted to its courses "special" or non-matriculated students, not candidates for a degree nor for any formal academic recognition. Such students were first admitted in 1890, by special vote of the faculty of applied science (then called the school of mines), as it was contrary to the general policy of that faculty to encourage the attendance of any but "regular" students, candidates for the degree. This policy was gradually modified, however, and from 1890 on the number of men admitted as special students increased rapidly, until it averaged over twenty in the school of architecture. In order to prevent an invasion of immature and inefficient youths, candidates for admission as special

students were required to be of "mature age" (*i. e.*, over twenty-one years old), and to give evidence of special qualifications, either technical or academic, for the privilege. The majority of these men have been draftsmen of several years' experience; others have been graduates of colleges or scientific schools. Nearly all have been earnest students who have entered the school for a definite purpose and with a clear idea of their own limitations and of what they wished to secure. Their professional experience has given them standing among their fellows, in spite of their lack of academic training, and quite a number of them have gradually made up their deficiencies in the requirements for admission, and taken their place among the "regular students" as candidates for the degree, graduating finally with credit. Since the establishment of the course leading to the certificate, moreover, the Trustees have extended to the non-matriculated students the privilege of promotion for special and distinguished proficiency, thus opening to them the opportunity of becoming candidates for the certificate or the degree without making up the requirements for admission. In other words, the authorities of the University by this provision recognize that there may be cases of unusual and conspicuous artistic and intellectual merit on the part of students whose early educational opportunities have been insufficient to prepare them for the school, who are too old to undertake the making up of these early deficiencies, but whose conspicuous ability in other directions assures their successful prosecution of all the regular studies of the course and gives promise of reflecting credit upon the institution which has given them its certification as graduates. It is obvious that this provision will not be applied very frequently, but it is well for every special student to know that it exists and can be won by special ability and effort. It recognizes the same principle to which the great Napoleon gave utterance when he declared to his troops that every man among them carried a marshal's *bâton* in his knapsack.

A non-matriculated student in the school of architecture is under the ordinary regulations of the school as to regular attendance upon its exercises. On entering the school he selects, in conference with the head of the school, the courses which he desires to pursue, and enrolls for these precisely as does the regular or matriculated stud-

ent; and he is expected to attend the examinations in the subjects for which he enrolls. There is no compulsion brought upon him in the matter further than the exclusion from a higher subject of any student who has not passed in the lower or prerequisite study. But the number of those who neglect the salutary stimulus of the examination is very small indeed.

The charge has sometimes been made in the newspapers that the universities — including Columbia University and its school of architecture — are “aristocratic” in their tendencies and indifferent to the interests of the “man on the street,” by which is perhaps meant the draftsman who comes directly from the street into the office without the training which a school can give. It is hardly necessary for one who addresses a public familiar with the history and the administration of Columbia University during the last fifteen or twenty years to enter into details by way of refutation of these charges. They have been made by persons unfamiliar with what the University and the school of architecture are doing. Such persons have remarked that the University charges heavy fees, which the draftsman in the office, however ambitious for an education, can not in some instances meet; and the demand has been made that the University should not only offer its facilities and resources free of charge or at a very low fee, but that it should also move down-town with its courses of lectures in order that the draftsmen may attend them without waste of time and energy. In reply it should first be remarked that the fees at the school are less than at many of the technical and professional schools of the country, and that they do not cover over half of the actual cost of the instruction given. All the rest is a pure benefaction to the student. Moreover, it may well be questioned whether an education obtained without sacrifice and cost is worth much. The draftsman who is sincerely ambitious for the higher professional education is likely to be the one who accumulates his savings until he can pay the cost. So far as the suggestion is concerned that the University should establish down-town lecture courses for draftsmen who are unable to give the time and strength and money required for attendance at the University, it is sufficient to answer that the department of extension teaching of Columbia University is prepared to establish such

courses whenever and wherever the small stipend required for the lecture is provided, whether by an individual or by a class. It is of course unreasonable to ask men already burdened with their educational duties at the University to give continuous and exacting service down-town in the evenings without financial recognition. Continuous gratuitous service is apt to be desultory and inefficient; but the University stands ready to come to the educational help of any group of draftsmen who will guarantee the necessary expense of the lectures.

Such extension courses, however, can not well take their place in the systematic and high grade work and discipline of the school of architecture itself. For the purposes of this discipline the student must be willing to devote a great part or the whole of his time to serious, concentrated and consecutive work; and to get the full benefit of this he must do it at the University, working in its libraries and laboratories, imbibing its spirit, coming into contact with his fellow students and the instructors, undergoing the moulding influences of the university atmosphere, both artistic and scholastic. Nothing else can be a substitute for this sort of work. The school of architecture and the director of extension teaching are glad to cooperate in helping young men whose opportunities and whose means are limited; but the school of architecture has for its prime function not the training of draftsmen, but the training of professional architects of the highest grade; men liberally educated and scientifically trained for the practice of a great and noble profession. This work demands all the resources which the wealth of the city and country can bestow in the way of endowments and equipment; the strongest and ablest men that can be found for its chairs of instruction; and students who are both able and willing to devote their entire strength for several years to the severest mental and artistic discipline.

A. D. F. HAMLIN

THE PUBLIC SERVICE OF THE UNIVERSITY

IN the *QUARTERLY* for March last, editorial comment was made upon the service which is constantly rendered by officers of this University, to the community and to the country at large, through their direct connection with the useful agencies of the times: and the hope was expressed that later a more extended and somewhat exact statement of this service might be made, because such presentation would necessarily enhance the appreciation of Columbia by the general public and thus enlarge its usefulness.

Following this thought, a circular letter was sent to each officer of the institution, asking him to be kind enough to make a detailed statement of his official relations to these public and quasi-public movements, and of his personal contribution to the general betterment of civic and social life through these organizations. The difficulty of securing anything like a complete statement was realized, because one cannot well report personal influence, and because those whose services are most valuable are the very ones who hesitate longest about making any statement whatever. A promise was made that all communications would be regarded as strictly confidential, that there would be no personal publicity whatever, and that only the results (not names) would be made public. About a hundred officers responded, in more or less detail. These reports have been supplemented by direct personal inquiry and by conference with heads of departments, who naturally know much about the activities of their associates. Both the formal reports and the conferences cover what may be called average cases or illustrations; including officers of various ages and rank, with different duration of service in this institution.

The inquiry touched upon official relations only, but it has been interesting to note the large and extended influence exerted by the University through the mere membership of its officers in various organizations. It is not too much to say that there is hardly a worthy association affecting the civic life of New York, or representing the various professions and callings which have local and national organizations, in the membership of which Columbia does not

play an important part. There is scarcely an officer of the institution who is not thus connected with some organization, and most of them are connected with a large number of organizations. First, naturally, come those societies or associations which directly represent their chosen fields of effort. But their membership and activities do not stop here, indeed they reach very far beyond the work of each day. That this membership is valuable to themselves goes without question. But it is equally true that the cooperation of these intelligent and expert men, moved by profound and sincere and unselfish interest, is of far greater value to the organizations. Nor should one overlook the influence exercised by these Columbia men upon the younger and more inexperienced members of these associations. Formal sessions are exceedingly valuable, but every one who has ever been so wise and so fortunate as to connect himself with such activities knows perfectly well that opportunity afforded men interested in the same lines of work to come together for informal discussion and for personal contact is much more valuable. This is not as important for the older men, those who have had years of experience in these meetings as well as in their chosen fields, as for the younger men: but for both, these informal discussions, by twos and threes or in groups, at odd hours and in out of the way corners, do a great deal in the way of coordinating research, stimulating investigation, cultivating *esprit de corps*, facilitating administration, and bringing the various institutions into friendly cooperation. It is well to know what all these people are thinking about, what is being attempted in our part of the vineyard; and many a young man has grown in grace and strength because he has been shrewd enough to be a regular attendant at the annual or other gatherings of the men of his class.

Official relations, however, give more definite opportunity for more definite service, and in these relations and in this service the officers of the University are continually distinguishing themselves. Of the great national organizations, including those which have an international reach as well, even the partial reports received show that nearly fifty have Columbia men on their official roster. Most of the highest offices in these organizations, offices which make the most exacting demands upon their incumbents and which offer the

largest opportunity for service, such offices as president or secretary or chairmen of executive or administrative committees, have been frequently held by Columbia men and many of them are now so occupied. Of state and civic societies, those directly seeking the betterment of civic and social relations, twenty-three are more or less under the direct control of those whose names appear upon our official list. The charity organizations, settlements, and like societies of the city show thirty-five officers from the Columbia directory. Sixty members of the faculties are giving their services as lecturers, either in the free public course at a minimum honorarium or for other societies or organizations without any return whatever. Eighteen of our officers serve as church trustees, fourteen are officially connected with private or public schools, eight are trustees of other higher educational institutions, sixteen are official advisers in specific civic, state or national undertakings, eighteen are serving in the Young Men's Christian Association, twelve are officers or instructors in Sunday-schools, ten share in official responsibility for the conduct of hospitals, three are members of boards of education, two are directors of public libraries, seven are officially connected with technical or trade schools or other forms of special education, eight are engaged in extended exploration, one is a director of a public museum, and one is "doing time" in a state legislature.

Incomplete as are these returns, they show an extraordinary range of activity and influence, a condition as gratifying to all interested in the University as to those who are directly benefited by this activity. While perhaps it is not quite true that the proportion holds good for these various forms of service, it is fairly correct to say that the number given above probably indicates about one-quarter of the actual positions occupied. It will be understood that these statements do not include positions for which salaries are paid—although through salaried positions the influence of Columbia on behalf of all favorable conditions of social, civic and even physical existence is very great indeed.

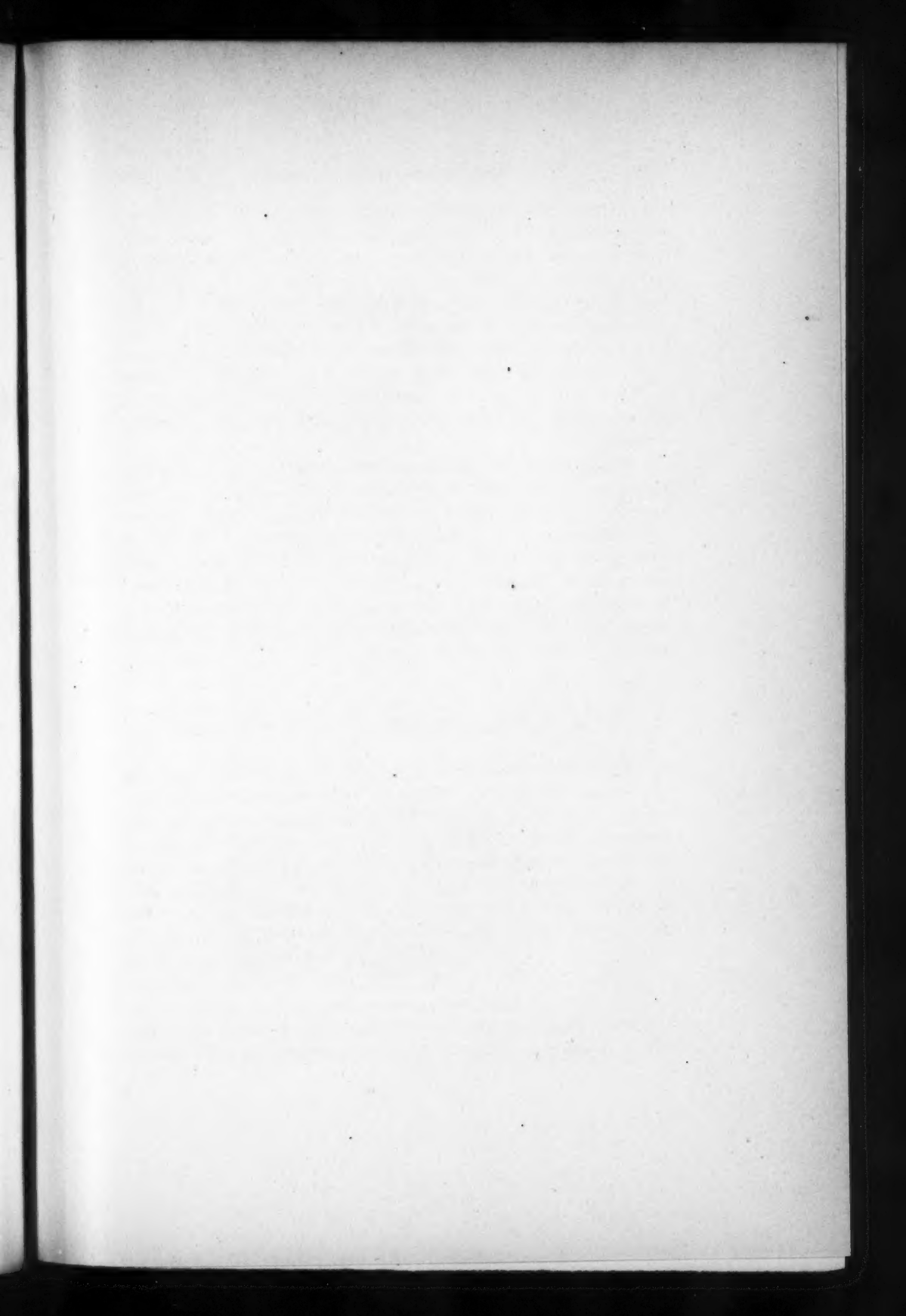
The March number of the *QUARTERLY*, in its bibliography, shows other lines of influence which may well be mentioned here. The University Press has been incorporated but thirteen years, is still practically a private undertaking though under University control,

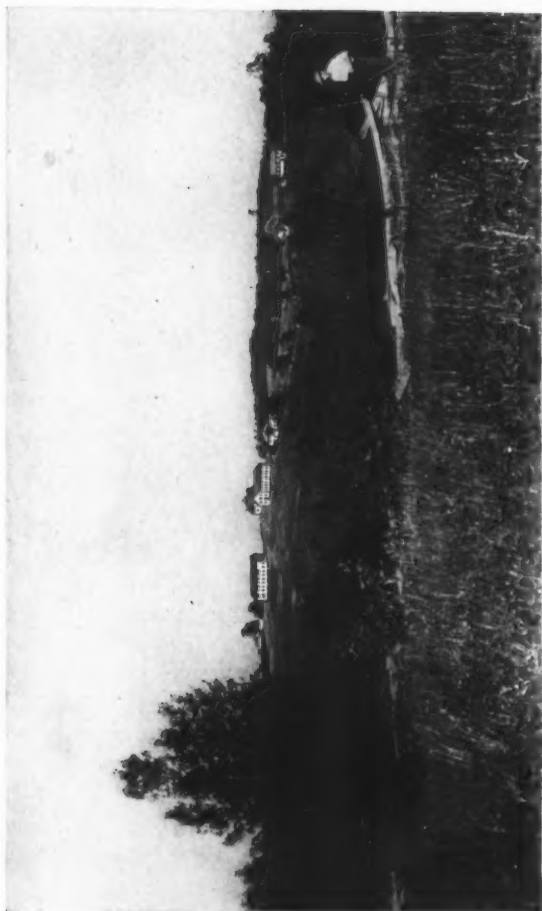
and determines with exceeding care the titles upon which it will put its imprint—yet in the thirteen years it has put out nearly a hundred volumes. Of publications, contributions, and serial studies sent out from the University, there are twenty-one. Sixteen journals of high standing and authority in their several fields are under the editorial control of the officers of this University, while twenty-one journals are issued with the editorial cooperation of Columbia men. During the year ending December 31, 1905, there appeared in print, with formal recognition, nearly eight hundred articles, papers, reports and addresses prepared and delivered by University officers.

Those who fail to appreciate that an officer of a metropolitan University is necessarily something more than an instructor, who sometimes give the impression that they feel as though a University Chair were an easy berth, who in the corners of the various clubs of the city sometimes jestingly refer to "three lecture hours per week" or "lectures given on the second Tuesday of each week" as summing up the duty and service of a University professor, should study this statement with some care and revise either their opinions or their expressions, or both.

THE SUMMER SCHOOL OF SURVEYING

THE location of Columbia University in the city of New York is not particularly adapted for local operations in field surveying. The officers charged with the instruction in surveying soon recognized this difficulty and took steps to increase the efficiency of the courses given by the University in this fundamental branch of the engineering profession. From about 1877 to 1882 they conducted the field-surveys with the City's permission in Central and Morningside Parks. The plan did not prove entirely satisfactory to either the University or the City. In fact, the conditions fairly forced the University to take a bold initiative and to establish a summer school of surveying at some distance from its seat. The experiment was first tried about 1883. Arrangements were made with a Mr. Benton to accommodate the instructors and students for





"CAMP COLUMBIA"
MORRIS, CONN.

one summer at his house and farm on the east shore of Bantam Lake in Litchfield County, Connecticut. During the next five or six years the Island Company of Litchfield and some other public-spirited citizens of the town allowed the students to have for surveying purposes free use of their properties on the north shore of Bantam Lake. In the summer of 1890 a farm of 125 acres near the south shore of Bantam Lake was leased for a term of years and the headquarters of the surveying school were transferred thereto. The topography, climate, and local surroundings at this point proved to be so satisfactory, so admirably adapted in every way to the requirements of a summer school of surveying, and the wisdom of concentrating the instruction in surveying into the summer months had been so clearly demonstrated by the results of twenty years' experience, that the Trustees of the University in 1903 purchased the property and four farms adjoining and established the Summer School of Surveying permanently at Camp Columbia, Morris, Connecticut.

No better location could be found for such a school. The topography is rough and varied. The ground is from nine hundred to twelve hundred feet above the sea and relatively high. The atmosphere is clear and dry. The days during July and August are moderately warm but never sultry and the nights are always cool, so that extra covers are generally necessary. Mount Tom (1325 feet high) is less than three miles away and in clear view. Mount Prospect (1365 feet high) is five miles north. Bantam Lake, which is about one half mile from the Camp, is nearly three miles long and from one half to two thirds of a mile wide, and twenty-five feet deep. The surface elevation is 896 feet above the sea. The lake has been recently stocked with black bass.

Litchfield, a beautiful village and a quiet summer resort, is the nearest town of any considerable size. It was there that the first law school in America was founded. Washington, Conn., another pleasant summer resort, is about six miles to the westward, Watertown eight miles and Waterbury fourteen miles to the southeast. The railroad station for Camp Columbia is Bantam on the New York, New Haven & Hartford Railroad. It is ninety-nine miles from the Grand Central Station. Two trains daily each way and

one extra train Saturday afternoon make the Camp accessible from the city without affording too great inducements to the students for frequent interruptions of work. The drive from Bantam to the Camp is nearly three miles, two thirds of which distance is along the shore of Bantam Lake.

Prior to 1903 the location of the school was regarded as temporary. Students lived in tents and instructors in the farm-house on the leased property. Meals were served to all in a common dining-room in the house. The school session up to that time was nine weeks long. However, the purchase of the property at Camp Columbia by the Trustees of the University in 1903 marked a decided change in the organization of the school. Several improvements upon the property have since been made for the better accommodation of the students and the more efficient conduct of the surveying work. Nine buildings have been erected and an abundant supply of pure water has been provided. A septic tank for sewage disposal is now under contract and will be installed before the opening of the next session in June. The nine buildings are devoted to the following uses: Two dormitories, having a combined capacity for 114 students, built to take the place of tents; a bath-house and lavatory, containing twelve showers and twenty-five basins; a dining-hall recently moved and to be remodeled in order to give added accommodation; a brick kitchen and bake-shop; an instrument house; a pump house; an administration hall, and a Y. M. C. A. building, the latter having been erected and given to the University by a friend of the school.

The water supply comes from a spring two thousand feet from the Camp and one thousand feet beyond the deep ravine that separates the Camp from the spring. The water is soft, very cold, and remarkably pure. There is no possible chance of contamination. The water flows out of a natural bed of sand and gravel into which a concrete curb eight feet in diameter was sunk eight feet. The discharge varies from twenty-two to thirty gallons per minute. From the spring the water flows by gravity one thousand feet to the pump house, where a 4" x 4" triplex Dean pump driven by a three-horse-power Nash gasoline engine forces the water through one thousand feet of 2" pipe to an elevated tank standing near the administration

building on ground one hundred and forty feet higher than the valley. The water is drawn from the tank for camp consumption.

A new road was built into the camp in 1904, making a short and direct entrance from the lake-road to the headquarters. It will be extended during the coming summer and other paths and walks built to reach the new buildings that have been recently erected. Two tennis courts and a baseball field will be added as recreation grounds. Plans looking to the improvement of the old farm-houses, roads, fences, and their proper maintenance, are now under consideration and will probably be carried into effect during the next year.

The instruction in surveying in Columbia University is given by the department of civil engineering and consists of lectures, recitations and problem work, supplemented by instrumental practice in field work, office work and computation and mapping. The theoretical portion of the instruction is given at the University. The field practice is given during the three summer vacations of the regular four year course. The subject of geodesy is given by the department of astronomy, and the practical work connected therewith is done under the supervision of that department by students in civil engineering during six weeks of the summer vacation between the third and fourth years. The theory of plane surveying, including railroad surveying, is given by the department of civil engineering. The field practice connected with these courses is conducted under the direction of the department of civil engineering at Camp Columbia. Five weeks continuous attendance is required of all students in chemical engineering, metallurgy, mining and civil engineering, during the summer between the first and second years. Five weeks additional attendance is required of all students in metallurgy, nine weeks of all students in mining, and seven weeks of all students in civil engineering during the summer between the second and third years. Four weeks continuous attendance is required of students in civil engineering during the summer between the third and fourth years. The school remains in session about sixteen weeks each summer.

The equipment of surveying instruments for these courses is unusually complete: Thirty engineers' transits, four solar attachments, one solar compass, twenty-eight surveyors' compasses, four-

teen wye-levels, two dumpy levels, twenty-eight level rods, twenty extra targets, twenty-four rod-bubbles, nine plane tables, fourteen telemeter rods, forty-one hand levels, twenty-four 300-ft. tapes, two 500-ft. tapes, twenty-four 100-ft. band-chains, seven 50-ft. excelsior steel tapes, ninety wooden range poles, forty-seven iron range poles, and a quantity of other small accessories. Current meters, hook gauges, and floats of various types are also used in making observations on the flow and in the discharge of rivers and canals.

The work of the school is divided into four well defined courses, which are referred to as Courses 15, 16, 16a, and 17 Civil Engineering. Course 15 is required of all first year students taking courses in the departments named above. The field work includes instruction in four surveys. Survey 1 consists of pacing, chaining, ranging out lines, and contouring. Survey 2 consists of angle reading with compass and a farm survey made with compass and chain. Survey 3 consists of the adjustment of the transit instrument, angle reading with the transit by repetition and by direction, and azimuth traverse in which horizontal distances are measured by the stadia and differences of elevation are determined from the vertical angle. Survey 4 consists of a repetition traverse in which angles are measured by repetition and distances are measured by a steel tape with corrections for catenary and temperature, and the determination of magnetic declination by observations on Polaris. The office work includes lectures, the reduction of field notes, the determination and application of corrections to the observed quantities, the computation of areas, mapping, and the making of final reports.

The class is divided into parties of two or three men each. The four surveys, which are described above, must be made by each party. Accurate execution of work as well as knowledge of the principles involved is required. Each party must complete one survey before taking up the next, and is advanced without regard to the progress of any other party. Credit is given at the close of the session for *completed* surveys only, and any survey which is not completed must be repeated at the beginning of the next session.

Course 16 is required of all second year students in metallurgy, mining and civil engineering. Course 15 is a necessary prerequisite. Advanced students in these departments who have not com-

pleted Course 16 are subject to the same requirements as second year students. The field work includes instruction in five surveys. Survey 1 consists in running a line of differential levels. Survey 2 consists of a topographic survey to be made with a plane table. Survey 3 consists of a topographic survey to be made with transit and stadia. Survey 4 consists of solar observations with transit and compass for the determination of the true meridian and magnetic declination. Survey 5a consists of municipal surveys—it includes the survey for a reservoir; the location of streets, grade lines and grade lines at street intersections; the sub-division of a city block and the location of building lines; staking out foundations for buildings and bridge abutments. Survey 5b consists of a mine claim survey in conflict with other established surveys. The office work includes lectures; the reduction and computation of observed data; making the maps, plans, and profiles, and drawing up of final reports.

Course 16a, hydrographic surveying, is required of all second year students in civil engineering. Course 16 is a necessary prerequisite. The field work includes triangulation, selection of stations, measurement of base line, angle measurement by repetition and by direction; topography on shore; soundings; current meter work; observation for river and tidal discharge. The office work includes the computation of the triangulation net work, adjustment of angles, computation of river discharge, preparation of maps and notes.

Course 17, railroad surveying, is required of all second year students in mining engineering and of third year students in civil engineering. Course 16 and the theoretic courses in this subject at the University are necessary prerequisites. The field work includes reconnoissance; preliminary surveys; location and cross-sectioning of a proposed line; and the resurvey of an old line. The drainage areas are surveyed and the sizes of culverts and other waterways determined. The office work includes lectures; making of maps, plans and profiles; calculations of earth work and other quantities incident to the construction of a railroad. Estimates are to be made and specifications drawn up for putting the work under contract.

The class is organized for work as an engineering party engaged in a regular railroad survey, except that each individual student is assigned to a different position in the party daily. This rotation in position insures equal division of work, equal opportunities, and equal experience. As each student must actually work in every capacity from axman to transitman, he becomes familiar with every detail of a survey and learns how to organize, direct, and manage an engineering party. The duties of each position and the necessity that each be faithfully and carefully done in order to obtain practical and rapid results are impressed upon him. He learns how to examine and estimate the possibilities of the country and thereby to choose the best route. In short, he learns how to locate a railroad and estimate the cost of its construction.

The attendance increased from fifty-nine in 1898 to one hundred and twenty-five in 1901. In order to provide instruments and accommodations for the men the equipment was increased and the school session extended from nine weeks to sixteen weeks in the following year. The attendance reached a maximum in 1903, when two hundred and three students were enrolled. The maximum daily attendance in that year was one hundred and twenty-six; the average attendance for the session was ninety-five; the average term of residence of each student was seven weeks. The attendance in 1904 was one hundred and ninety-two, the maximum daily attendance one hundred and fifteen, the average attendance eighty-seven, and the average term of residence of each student six weeks and two days. In 1905 the attendance was one hundred and sixty-six, the maximum daily attendance one hundred and three, the average daily attendance seventy-six, and the average term of residence of each student six and two thirds weeks.

EARL B. LOVELL

THE ASSOCIATION OF AMERICAN UNIVERSITIES

THE seventh annual conference of the Association of American Universities met this year on March 14, 15, 16 and 17 on the Pacific Coast, the opening and closing sessions being held in San Francisco and the intervening ones at the two California universities. Ten of the fifteen institutions included in the membership

of the Association, *viz.*, the University of California, Chicago, Columbia, Cornell, Harvard, Johns Hopkins, Leland Stanford, Princeton, Wisconsin, and Yale, were represented by delegates, among whom were the presidents of the University of Wisconsin (the president of the Association for the current year), of Johns Hopkins, of the University of California, and of Leland Stanford. The attendance was considerably smaller than at previous meetings, in that the various institutions, doubtless because of the distance and the time involved, in most cases sent but a single delegate. This resulted directly in less discussion of the papers than has been usual, though the papers themselves as a whole were even more than ordinarily interesting and suggestive. Papers were presented on behalf of the University of California, Harvard, Leland Stanford, Yale, Cornell, Columbia, and Princeton.

The first day's session was held in the Regents' Room of the Mark Hopkins Institute of Art, in San Francisco, when papers were read by President Wheeler, of the University of California, and Professors William James, of Harvard, on the "Interchange of professors in universities." President Wheeler's paper which, in addition to the interchange of professors in its usual sense, considered the constitution of the faculty from the point of view of the academic origin of its members, was primarily a plea for the maintenance by the different universities, and particularly by the colleges, of their own individuality. "We ought not," the speaker contended,

to be particularly desirous of growing more alike. It is to the interest of the country that we each maintain a character of our own, true to our historic traditions and adjusted to the work we each have at our doors. Particularly is this desirable in the case of the smaller institutions, called colleges. They would do well to fill at least half their positions from their own graduates. A college full of migratory teachers will be a colorless college. The latter day abhorrence of breeding in-and-in has given all our institutions a reasonable immunity from isolation, and the larger universities, where research is encouraged, are surely not tending at present in the direction of particularism. The issue of particularism and distinctive character is not, however, involved in that of autonomy. The complete autonomy of each institution will be preserved under a system of interchange provided each case is settled for itself by individual agreement between the two institutions concerned.

Beyond that it would be unwise to have the system extended. The interchange should not be limited to older men of established reputations. Young men will gain most from the opportunity. It is a most unfortunate limitation upon the usefulness of a great body of our professors in all the universities that they have not taught in more than one institution. They are limited in their associations, limited in their conceptions of what it is possible to do by way of teaching, study, research, and limited in their views of university policy. Many a good university man would have been rescued from aridity if by transfer to another institution he could have been shaken out of his congealing ruts before the frosts of fifty fell upon his way. It is in general a safe rule not to allow a man to receive his three advancements in the university career—instructor, assistant professor and professor—at the hand of one and the same institution.

Professor James's paper concerned itself particularly with a consideration of the interchange of professors between Harvard and the University of Berlin, and described in detail the conditions that were met by Professor Peabody, the Harvard representative, in Berlin, and by Professor Ostwald in Cambridge. The system was commended as having fully realized the intentions of both institutions. The writer justified the Harvard procedure of delivering the lectures in the native language of the lecturer, *vis.*, English in Germany and German in America, as tending to leave the instructor less hampered in the expression of his thought, than would be the case in the use of a foreign speech, and to offer no restriction in the selection of those who were appointed to fill the chair to the limited number of men in the two faculties who could speak the language of the country to which they were accredited. In the discussion that followed it was pointed out that in the establishment of the Roosevelt professorship at Berlin, and the corresponding professorship at Columbia, the opposite attitude had been taken, and German, except in the special work of the seminar, is to be used as the medium of instruction by the American professor in Germany, and English by the German instructor in America. In justification of this attitude, it is thought that the lecturer can only exert a wide influence, or even attract wide attention, if he uses the language of the students who are his hearers. The difficulty of the possible restriction in the choice of an incumbent is to be obviated

by drawing, in the one case, from all the Prussian universities, and, in the other, not alone from the faculty of Columbia, but from any American university whatever, which will be willing to lend the proper man in a desired subject.

The second day's session was held in the faculty room of the new California Hall, of the University of California, at Berkeley. The papers, on the subject, "To what extent should professors engaged in research work be relieved from instruction?" were presented by President Jordan, of Leland Stanford, and President Hadley, of Yale, the latter being read, in the absence of the writer, by Professor Theodore S. Woolsey, the delegate of that university. Professor Jordan's paper was a brief for the wider recognition of the claims of research work in the universities of the country.

The university should recognize the need of research to university men and in a much greater degree than is now the case in any American university. It should provide for this by furnishing all needed appliances, material, books, leisure and freedom. These needs must vary with the individual man and each competent instructor can be trusted to indicate his own; the university authorities should concern themselves only as to his competence and their own ability to respond. Men should not be encouraged to undertake research in order to gain professorships, rather they should gain professorships to make research fruitful. Freedom should be granted from cheap and sterile activity, from routine work any subaltern could do as well, and, above all, from the thousand makeshifts of poverty.

This relief is far more needed than relief from teaching. In our universities we teach too much: too much not worth while, to too many people, at too low a tension, with too great patience, and too little responsibility. A university professor should do nothing he can hire a cheaper man to do just as well. The final end of university research is the vivifying of teaching. Teaching at second hand is not university teaching.

President Hadley's paper, like President Jordan's, was a plea for more extended research work, and the provision of broader opportunity for those instructors, both young and old, who are capable of pursuing it. "Every good university," said the speaker, has among its professors men of two classes: some whom it values for their ability in teaching old truth, and others whom it values for their ability in bringing out new truth. Men of the former

type are commonly said to be engaged in instruction; men of the latter type are said to be engaged in research. Our recitation rooms and lecture halls are in charge of men of the former class. Our laboratories, museums, and observatories are supposed to be in charge of men of the latter class. It is hard to say just how large the two groups are numerically, or how far the men of the second group are actually relieved from classroom teaching in our different universities. The question before us is, not whether we have enough research or enough instruction, but whether we shall gain or lose by an attempt to separate the two more fully than we do at present. We do not want the two things separated, we want them combined. Every university, as soon as it has money enough to pay men for anything besides classroom work, should see that the opportunities for research are developed as widely as possible among its teaching force. Every instructor who is devoting his time and strength to university work should have the opportunity to give at least one course in a department of his subject for which he really cares—a course which he gives not because the university needs that particular subject or branch of the subject in its schedule, but because he himself wants to study and teach it, and believes that he can make something more out of it than others have done before him. The younger instructors, however, are not the only ones who need more freedom. The older ones also have their burdens of a somewhat different kind. The pressure of routine often lies as heavy upon the experienced man as the pressure of authority lies upon the man who has his career before him; and the better a man teaches, the more his routine duties crowd upon him as he gets older. It is the duty of the university authorities to relieve this pressure. He should be given increased time for research by the diminution of his lecture hours where that is possible, and in any event by the appointment of readers, demonstrators, and other assistants who can relieve him of burdensome parts of his work. The best teachers should be freed from the unnecessary burdens due to their popularity, and should avail themselves of the chance, thus afforded, to make researches of their own; our younger men, who have still to prove what they can do both in teaching and in research, should be given the widest opportunity for independent investigation and the independent management of their classes.

The third day's session was held in the council room of Leland Stanford University, at Palo Alto. The papers, by President Schurman, of Cornell, and Professor William H. Carpenter, of Columbia, were on the "Reaction of graduate work on the other

work of the university." President Schurman's paper considered the effect upon students and instructors of graduate work done side by side with undergraduate work in the same institution. It was pointed out that the work of a thoroughly equipped graduate student affords an object lesson to undergraduates in refined methods and gives them a unique stimulus for independent mental development. Such graduate students also give a stimulus to the professors themselves. From the point of view of the teacher of the humanities and pure science, particularly, there is a most beneficial result from the prosecution of graduate work in the university. It keeps the professor alive, fresh, and growing; for the intimate personal relation into which a teacher is brought with his graduate students prevents him from becoming stereotyped and rigid in his views. There should be a most intimate connection between the work of the undergraduate and the graduate departments, and every instructor should give at least one course of advanced research work. The undergraduate also will get fruitful ideas from the contact with advanced work. The character of undergraduate courses will necessarily be broadened, changing with increasing specialization from the first and second years of general instruction until the student acquires the full effect of association with graduate students and becomes himself ready for the higher work.

Professor Carpenter's paper, on the same subject, is printed in full herewith:

A fundamental difficulty in the discussion of this topic lies, of course, in the absence of fixed conditions, and of anything but a varying terminology to describe them. The term "university" is altogether a shifting concept, even when it is legitimately applied to those institutions which, like the members of this Association and others in the community, do actual university work. The relationship of the college to the university in America, is still, and perhaps always will be, wholly indeterminate except as a general proposition, for those of us—and they are a majority of the whole—who, in the evolution of a system of the higher education have developed the newer university by accretion about the nucleus of the older college, under the dictates of expediency as determined by environment have perforce evolved the former and retained the latter in positions widely divergent. In some few of our American institutions, university work from the beginning has developed synchronously with

the work of the college. In one case, at least, the general condition of development has been reversed and the college at a subsequent time has been added to the university.

The relation of graduate work to the other work of the composite American university is dependent upon the place which it relatively occupies with regard to the whole: whether, on one hand, it is a side issue, an accidental growth that has been allowed to develop without far-reaching thought, either of its own perfect fruition, or of its ultimate effect upon the parent stem; or whether, on the other hand, it has been recognizably an articulated part of the whole, a scion carefully set, not only to develop itself through its coherence with the earlier stock, but with a thought to infuse the latter with more energetic life as the result of its presence. Both of these conditions have existed in the development of graduate instruction in America. In some cases, to use another figure, graduate work has seemed to have been viewed very much as a by-product that has appeared in the process of more extended educational production, natural, doubtless, to the time and place, but to a certain extent unwelcome and embarrassing. In these instances, for reasons that have varied with the fundamental conditions present, it has been accepted with toleration and has even been allowed to increase, but it has not been conspicuously encouraged. In some of our institutions, partly as a consequence of such an attitude toward it, graduate work still concessively occupies a relatively small and insignificant place in the program of studies, with the necessary accompaniment of a small body of instructors to direct such work and a small body of students to pursue it.

In others of our institutions, however, graduate work even in its beginnings has been recognized in its true aspect as a significant sign of the times, as the inevitable concomitant of more enlightened cultural conditions in the community, and these institutions have not only readily accepted it as part of an order changing, but by every means in their power have furthered it as a welcome expansion of educational opportunity. These institutions, by their attitude of approval, have given to graduate work an undoubted prestige in their body politic. With the development of the work that in many cases has naturally and logically resulted, there has been a necessary increase in the corps of instruction, and students have been attracted through the advantages offered by the better equipment.

The relation of graduate work to the other work of a given institution and the consequent reaction that will be exerted by the one upon the other will depend upon the conditions enumerated and others coexistent with them. It will depend upon the place which

each has been accorded in the whole, and it will depend upon the attitude which the two have ultimately acquired in relation to each other. It will depend upon whether the one is rigidly superimposed upon the other, as is the case in some institutions, or whether the two are carefully articulated, as is the case in others. It will depend upon the relative amount of graduate work actually accomplished; upon the size of the body of instructors who conduct it in relation to the entire corps of instruction in the university, and upon the number of students who pursue it in relation to the entire student body. It will depend, too, to no small extent, upon the constitution of the body of graduate students; upon whether its members are sordid and self-seeking, and, consequently, in a measure aloof, as we have been told in some cases they are, or whether, as in other cases they appear to be, they are a sympathetic and patriotic part of the whole, who, even more than the rest, because of a maturer and better appreciation of opportunities and purpose, are eagerly and enthusiastically bent upon enkindling their torches with the common fire.

At Columbia University the conditions of relationship between graduate and undergraduate work have been in action long enough to permit, along definite lines, a fairly accurate estimate of results in this particular environment. The amount, too, of graduate work, from the standpoint of the number of courses of instruction given, the size of the body of instructors giving them and the student body taking them, is relatively so large and important that an influence is inevitably at hand, if at all, and should plainly be discernible.

Historically, the development at Columbia has been the gradual growth of graduate work about the preexistent and coexisting college. There has been at no time a forcible expansion of such work, and except in a single case of the gift of an endowment for the specific purpose of teaching a remote, but important, subject—the Chinese language and literature—it has only been supplied because it has been demanded by intending students. The demand for graduate instruction has naturally arisen and the provision of increased opportunity for it has paved the way for more.

Graduate work at Columbia is intimately articulated with undergraduate work along lines that are constantly broadening. In the academic year 1904-05, to cite the last complete statistics at hand, in a net total of 4981 students in the whole university inclusive of students in the summer session of 1904, but not of students in extension courses, there were enrolled under the three non-professional graduate faculties, philosophy, political science and pure science—

the *Philosophische Fakultät* of the German universities—782 students, a great majority of whom were candidates for the degree of master of arts or doctor of philosophy, or both. These were students, who, to quote a late presidential report, were “devoting themselves to pure scholarship and methods of investigation, with no professional end in view, unless it be teaching or public service in some capacity.” This total of 782, however, does not include 136 college graduates studying under the professional faculties of law, medicine, and applied science, who are also candidates for the degree of A.M. or Ph.D.*

The three faculties enumerated are *per se*, and in the sense of this paper, the graduate schools of the University, although since 1903 the law school has also been a graduate school. Graduate students as candidates for the professional degrees are also widely distributed throughout the University. This same year, 45 per cent. of the enrolment in the medical school, 14.8 per cent. of that in fine arts, and 13 per cent. of that in the schools of applied science, were made up of the holders of degrees or their foreign equivalents. There were actually in residence during this year under the corporation proper 1378 students who had already been graduated from a college or scientific school, or a European institution of equal rank, or 47 per cent. of the entire body.

The total number of students enrolled under the corporation proper in 1904-05 was 2935; of these 782, as has been stated, or 26.6 per cent. of the whole, 559 of them men and 223 women, were the students doing the actual graduate work of the University under its non-professional faculties. The degrees or their equivalents already held by these students were widely distributed, in that 219 different institutions, 176 domestic, and 43 foreign, were represented by their graduates.

For us, at Columbia, the development of the graduate work of the University has meant the development of the college. It has brought with it a notable expansion of the program of study in which the undergraduate student has been fully allowed to share; it has furnished him with a stimulus and an added incentive; it has widened his horizon by his contact with students of a superior culture and a broader outlook; and it has in very many cases induced him to pursue further a predilection which the ordinary opportunities of the college curriculum would never have brought into existence.

The influence of graduate work upon undergraduate work is most directly and unequivocally exerted at Columbia in those courses

* Columbia University, annual reports, 1905, p. 203.

of instruction which, although primarily graduate, under the arrangement of the program of study are open alike to graduates and to properly qualified undergraduates, from the nature of the case, regularly and usually members of the two upper classes of the college. There are offered in this way during the present academic year, under 195 individual instructors, no less than three hundred courses, open both to graduates and as electives to such undergraduates as are qualified to pursue them. Under the conditions that prevail at Columbia the influence that is exerted in these courses is only in the rarest instances reciprocal. In the great majority of cases, and overwhelmingly, it is exerted from above downward. It is the graduate work which *gives*, and the undergraduate work which, as inevitably, *takes* as a result of the contact.

The opening of courses primarily graduate to undergraduate students, and wholly apart from the fact as to whether the undergraduate is in a large number or a small number in such courses, is to elevate the character of the instruction. The effect upon the undergraduate student of the presence of graduate students in these courses—some of which, with the development of the college curriculum, must still have been offered as electives in the absence of the graduate instruction—is to stimulate him to increased effort by bringing him into intimate contact, in the classroom and outside of it, with fellow students who, in the main, are maturer and of greater experience, and who are characteristically far more serious and eager in the pursuit of knowledge—of setting him, in short, a pace which he would not always have taken of his own initiative. The effect upon the instructor in such courses is to put him on his mettle and to induce him to give out his best, for he is conscious that his composite public is already possessed of a wider standard of judgment than is possible to the undergraduates of the home institution who have felt only home influence.

The presence of graduate work elevates the whole tone of instruction in the institution—in any institution—by making it imperatively necessary to have in the corps of instruction of the university, not merely the teacher who teaches, but much more largely than is either possible or useful in the college of the teacher who also investigates. And in just this way it widens the opportunity of the undergraduate student by giving him, in addition to the instruction which under the conditions of the college curriculum is of necessity first of all an exposition of accumulated knowledge, more surely than before a premonition, at least, of the spirit and method of investigation which, through its own discoveries, is adding to the ultimate total of knowledge. It has not only increased

in quantity and intensified in quality the work performed by the undergraduate student, but by this demonstration of the meaning of receptive scholarship on one hand, and of productive scholarship on the other, it has immeasurably broadened his horizon and pointed out a way for future usefulness.

The students of the non-professional graduate faculties who are pursuing their chosen lines of advanced study and investigation and the teachers who, in directing them, are continually breaking new ground, "represent," as President Butler writes in the annual report of 1903, "the very heart of the University." "In the schools of philosophy, political science, and pure science," he continues, "students and teachers are associated together in pushing forward the boundaries of human knowledge and in increasing the measure of human appreciation in some way, great or small. It is this spirit of investigation, of the scholarship which produces and not merely relates, that gives to these schools their tone, and to the university as a whole its best inspiration."

The concluding session was held, like the first, in the Mark Hopkins Institute of Art, in San Francisco. The paper, on the "Organization of the American university with especial reference to the changes in the conception of a 'Faculty,'" was presented by Professor Andrew F. West, of Princeton, who made a plea for the preservation of older 'Faculty' ideals, which, according to the writer, are in danger, in the invasion of business methods into university administration, of being lost sight of and forgotten. "The root of the old faculty," he said,

was a Christian ideal involving self-denial and devotion to the cause of knowledge and truth. It made the old college great. Against this ideal the fiercely practical side of our American temper has been consciously or unconsciously acting. Achievement in visible things fought against faith in the invisible. The ideal of outward success has grown with our enormous material growth. The business world is invading the university; its message is efficiency, success. By reason of the invasion of business methods without regard to the fact that the only business of a university is education, a great change has come over our faculties, especially in their relation to the president, who is getting to be looked on too much as a business man supervising the work of his employees than as the natural, as well as official, leader of a free faculty. This is our chief danger today. Education, however, is a business; universities are corporations; they must do their work efficiently or go under; a corporation

must use business sense in all its work. The president must be the head executive officer to guarantee this efficiency, but if this is all there is in the proposition that education is a business, then our faculties are in a bad way. The other and better half of the truth is that the business of a university is education. This and this alone must control everything. It is necessary to save our faculties from being degraded into the condition of employees and to be kept from becoming actually more inefficient.

Officers were elected for the ensuing year as follows: President, the University of California; vice-president, Harvard University; additional members of the executive committee, University of Wisconsin, University of Chicago, and Columbia University, which still continues in the secretaryship. To this committee was left the determination of the time and place of the 1907 conference. No important questions of policy came before the Association at this meeting and no additional institutions were elected to membership.

The social side, never neglected by the hosts of the Association at their annual conferences, was this time more than usually accentuated, in that the delegates were also formally entertained by the University and the Bohemian Clubs, and by the many alumni associations in San Francisco. The dinner given by the Columbia Alumni Association to the delegates from this University, a more detailed account of which is contained elsewhere in this number of the *QUARTERLY*, was particularly enjoyable for the interest and enthusiasm of these older alumni for the new Columbia, which many of them had never seen. The Association in adopting a vote of thanks for the hospitality of their hosts, the University of California and Leland Stanford, fairly outdid itself in its expression of appreciation. It would, however, scarcely be possible to overestimate the genuine warmth of the welcome which was extended, both by the hosts of the conference and the various organizations of San Francisco, which vied with each other in making this meeting of the Association a memorable one in its history.

WILLIAM H. CARPENTER

Since the above was written, earthquake and fire have devastated the bright and busy city which so warmly welcomed the members of the Association, and the places in which they were hospitably

entertained no longer exist, except as blackened rubbish heaps in a chaos of desolation. One of the hosts, too, of the Association, Leland Stanford University, has severely suffered in the destruction and mutilation of its buildings, which had been constructed to withstand this very force that has suddenly overthrown them. To the twice stricken community and the crippled university our deepest sympathies are extended, with the heartfelt hope that a still more beautiful city may speedily arise on the ashes of the old, and that our fellow institution may straightway again enter unimpaired upon its career of usefulness.

W. H. C.

STUDENT ORGANIZATIONS AT COLUMBIA

I

EVEN the instructors and students now at the University are amazed when told that the student organizations of the University, exclusive of secret societies and student publication boards, number in the neighborhood of one hundred. These organizations may be classified as follows: Eighteen athletic organizations, eighteen departmental societies, eleven debating clubs and moot courts, eight religious societies, eight self-government boards, six semi-secret societies, six journal clubs, six miscellaneous organizations, five graduate clubs, four musical clubs, four preparatory school clubs, three political clubs, three societies of race and section, and two general societies.

The three oldest organizations are the Philolexian Society, founded in 1802; the Chemical Society, established in 1870; and the Barnard Literary Association, started in 1877. The fourth non-athletic, non-secret society, in point of age, is the Undergraduate Association of Barnard College, organized in the spring of 1892. Thus it is at once seen that of the non-athletic, non-secret societies (numbering eighty-four), all except four have been in existence but thirteen years or less. So far as my records show, only about a dozen of these eighty-four organizations antedate the removal of the University to its present site, in 1897. Over one third of them were established during the years 1900 to 1905, inclusive; and while 1894 was the single year before the removal in which as many as two

societies were formed, in no year since 1897 have fewer than two been established.

The half dozen of these student organizations which sprang into being before Columbia was yet a University were of a general scope and character, and in them the undergraduates of those days seemed to find all the expression their intellectual activity desired. But the organizations of more recent years have reflected Columbia's rapid advance toward a university, especially the institution's ever-increasing tendency toward specialization, so that, in addition to the old debating clubs and the Chemical Society, there now flourish technical, scientific, and professional societies in great variety. Even the general Graduate Club, which, till a very few years ago, bonded all graduate students together for intellectual cooperation, has been replaced by the five distinct graduate clubs, and the eighteen departmental societies, in which graduate joins with undergraduate in the extra pursuit of their chosen subjects.

DEBATING SOCIETIES AND MOOT COURTS

The PHILOLEXIAN has preserved an unbroken existence for a hundred and four years; and, in 1902, it held a centennial celebration at the University.* Did the present paper pretend to historical completeness, it might point out that Philolexian was preceded by other societies of a similar nature. At the eleventh annual Commencement of Columbia College, to note the earliest record, silver medals for distinction in oratory and composition were awarded to Gouverneur Morris and Benjamin Moore, by the "Literary Society" of that time; and never since, apparently, has Columbia been without such an organization among its students. But only Philolexian and the Barnard Literary Association have persisted from any distant day. Simply to call the honor roll of Philolexian is impressive; a few of the distinguished names are Abram S. Hewitt, Elbridge T. Gerry, George L. Rives, William H. De Forest, Joseph Larocque, William Dudley Foulke, Stuyvesant Fish, Hamilton Fish, Marvin R. Vincent, J. Howard Van Amringe, William Barclay

* See "A history of the Philolexian Society of Columbia University from 1802 to 1902," by Ernest A. Cardozo, '99; published by the Society, N. Y., 1902. An abstract of the historical sketch appeared as a serial in the *QUARTERLY*, December 1902, March 1904, and March 1905.

Parsons, William Milligan Sloane, Captain Alfred T. Mahan, Brander Matthews, Gustav Kobbé, and John B. Pine.

But our present concern is with the Philolexian Society as it now is. Its object is "to improve members in oratory, composition, and forensic discussion." In May, 1852, an Honorary Prize Fund of \$1,500 was established by the honorary members of the society, the income from this fund to be distributed annually in prizes, to be competed for by the undergraduate members. The prizes are seven in number, and are awarded for the best three orations, the best two essays, and the best two argumentative debates. Regular active membership is open to all members of the University, except Freshmen in the College, and is limited to forty. From time to time, the society elects honorary graduate members and honorary members.

Although the light of Philolexian has never flickered out like that of all its predecessors and of all but two of its early contemporaries, it has at times burned low. At one of these periods of depression, 1877, the BARNARD LITERARY ASSOCIATION was organized as a protest against the "informality, disorder, and indecorum" with which Philolexian was then conducted. The new Association purposed a return to "earnest and dignified exercise in declamation, reading and debate."* The strained relations which gave birth to Barnard have long since been forgotten, and the two societies now hold annual joint debates, the honors being thus far about equally divided. The Association at present devotes its energies to the acquiring of facility in debating and extempore speaking; occasionally members read essays, the merits of which are examined into by the critic, whose further duty it is "to correct the faults which he may discover in their construction or presentation." Membership in the Association is open to all students of the University, there being forty members at present, twenty-five of whom are active. In addition to the annual spring debate with Philolexian, Barnard holds a debate with the Zelosophic Society of the University of Pennsylvania each fall. Since September, 1902, out of three debates with Philolexian, three with the Pennsylvania society above

* See "Handbook of the Barnard Literary Association of Columbia University," published by the Association in 1899.

mentioned, and one with a Williams debating society, Barnard has suffered defeat only once—that at the hands of Pennsylvania.

In 1893, by joint resolution of Philolexian and Barnard, the COLUMBIA UNIVERSITY DEBATING UNION was created, each society electing three delegates to the Union. In 1905, the Law Forum was granted the same representation in the Union; the FRESHMAN DEBATING SOCIETY sends one delegate. The Union was formed for the purpose of facilitating intercollegiate debating. Philolexian has held contests with societies of Harvard and Chicago, and Barnard with Pennsylvania and Williams societies, but Columbia is now represented by teams selected by the Union.

From the beginning of the last century, the Freshman class has intermittently had its own debating society. The Freshman organization was revived at the time of the removal of the University to Morningside, in 1897, and has ever since been active in training prospective members of the upper-class societies. The Freshmen hold debates with preparatory schools and with more or less informal teams of Sophomore debaters.

In 1905, three students of the 1907 law class, who felt that the Barnard Literary Association, of which they were members, did not offer the best opportunities to law students and did not encourage them to join, founded the COLUMBIA LAW FORUM. The law students found in this new society valuable aid to their legal training and were quick to seize the opportunity for practice in public speaking. At the meetings, the members debate and make speeches—both extemporaneously. There is no regular chairman, the members presiding in alphabetical order, but there is a governing board of three. There are no dues or expenses of any kind; the members number at present seventy-six.

The law students, however, secure a still more professional discipline in their various moot-court clubs, of which there are five—the Hamilton Club (1894), the Temple Club (1895), King's Club, the John Marshall Moot-Court Club (1901), and the John Jay Club. All of these clubs have practically the same purpose, though the Temple Club defines its object as "the discussion of cases and legal questions"; the Hamilton Club declares its object to be "to aid the legal studies of its members by affording opportunity for moot-court

work and to establish friendly intercourse between members of the several classes"; and the Marshall Club aims "to supplement the regular work of the Law School by actual work in pleading and practice, preparation of briefs, arguments of points of substantive law; in other words, to add to the more or less theoretical training of the class-room work, the practical applications of court work, as far as possible."

About every two weeks, from November to March, inclusive, the members of the HAMILTON CLUB dine together and then listen to an argument on some mooted point of law. One member from the second year class and one from the first year class argue on each side, and the third year members and the remaining second year members act as judges. As considerable pride is taken in working up a good case, involving a close question, the arguments are frequently of exciting interest. The final case of the academic year is prepared with especial care, and two members of the law faculty act as judges. An annual banquet is held, which is attended by most of the Hamilton alumni in the vicinity. The Hamilton Club is particularly active, and from its members have been elected twenty-two of the twenty-six men who have constituted the various boards of the *Columbia Law Review* from its incipency. This is a remarkable showing in view of the fact that the membership of the Club is limited to eight from each class.

The TEMPLE CLUB meets once a month, the regular order for the meetings being the argument of a supposititious case at law or equity. Briefs and opinions are submitted in writing and filed. In other points, the procedure of this Club does not differ materially from that of the Hamilton.

The MARSHALL CLUB meets weekly for the trial of cases. Usually the arguments are based on a written statement of facts involving some point of law arising in recently reported cases, or one about which the authorities are in dispute. At intervals a trial is carried out in all the details of an actual litigation in court, certain selected witnesses acting out a commercial transaction, and trying the questions arising before a judge and jury. Once or twice a year a banquet is held, at which former members, now of the bar, address the Club on such practical topics as beginning practice, office-

work, and the like. These brief accounts of three of the clubs will sufficiently indicate the general purpose and individual differences of all five. The Green Bag Club has ceased to exist.

Barnard College also has an organized interest in debating. In 1904, the BARNARD UNION was formed out of two earlier societies, the Barnard Debating Club and the Barnard Bear. Inasmuch as the latter society was literary in its ambitions, the present Union is more than a debating society; it holds, in addition, literary meetings which have been addressed by such distinguished men and women of letters as Mark Twain, John Oliver Hobbes (Mrs. Craigie), and Richard Watson Gilder, as well as by prominent professors of the University. The Union also publishes a quarterly literary magazine, *The Barnard Bear*. The membership is now one hundred.

DEPARTMENTAL SOCIETIES

The COLUMBIA UNIVERSITY CHEMICAL SOCIETY is the oldest of the departmental societies, having been founded in 1870, and reorganized and revived in 1897, when the school of chemistry took possession of the Havemeyer laboratory. The object of the Society is "to promote social intercourse among present and past students of the School of Chemistry, and to increase their knowledge of professional subjects." The following eminent chemists have been entertained: Dr. Harvey W. Wiley, chemist of the U. S. Agricultural Department; E. Hart, professor of chemistry at Lafayette College; Charles Baskerville, professor of chemistry at the College of the City of New York; and many others. This year, the Society has held one business meeting, and two dinners at the Harlem Casino, at which Dr. Russell W. Moore, chemist at the U. S. Appraiser's Stores, and Mr. H. L. Harris, of the Pacific Coast Borax Company, spoke, and two dinners at Little Hungary, at which Professor C. E. Pellew and Dr. A. P. Hallock spoke. Thirty-three alumni members, twenty-two honorary members, and fifty-three student members constitute the present roll. The Society has its own song-book, in which appears Will Bradley's inimitable song, "Van Am."

In January, 1897, was organized the BARNARD BOTANICAL CLUB, for the purpose of promoting the interests of the botanical depart-

ment of Barnard College, and of encouraging friendly relations among the students of the department. The teaching staff of the department, and any student who has completed at least one year of the botanical course and is continuing her work in the department, as well as any graduate student who has completed the equivalent of these requirements, is eligible to membership. In November of each year the Club conducts a business meeting, and in the spring a social meeting is held in the laboratories of the department. The Club has entertained Dr. Daniel MacDougal, lately assistant director of the New York Botanical Gardens, now director of the department of botanical research of the Carnegie Institution; Mrs. N. L. Britton, bryologist at the New York Botanical Gardens; Dean Laura D. Gill of Barnard, and her predecessor, Dean Smith (Mrs. George Haven Putnam). In 1898, the Club presented to the Trustees of Barnard College, the sum of \$500, with which to equip a laboratory for the study of physiological botany, as a memorial to Dr. Emily E. Gregory, the founder of the Club; and in 1903, the Club devoted \$35 to the purchase of botanical pictures for Barnard, where they now adorn the walls of Brinckerhoff Hall, near the laboratories. The Club has listened, from time to time, to technical lectures by eminent authorities. The last lecture was of exceptional interest and importance, since it presented, for the first time publicly, new facts bearing on the mutation theory. The Club makes occasional expeditions; and, once a year, entertains the college at large. The members now number sixty-four, seven of whom are honorary.

LA SOCIÉTÉ FRANÇAISE DE L'UNIVERSITÉ COLUMBIA originated in a voluntary gathering, in the fall of 1898, of students who spoke French. The most valuable and interesting work done by the Society is the annual production of a French play, the casts for which are selected from among the students in French in Columbia and Barnard Colleges. Some of the plays which have been presented are "*Bataille de Dames*," by Scribe and Legouvé; "*Les deux sourds*," by Jules Moinaux; "*L'été de la Saint-Martin*," by Meilhac and Halévy; "*L'anglais tel qu'on le parle*," by Tristan Bernard; "*Les vivacités du Capitaine Tic*," by Labiche; and "*Le médecin malgré lui*," by Molière. The plays have always been highly successful, and the Molière farce put one hundred dollars in the So-

ciety's treasury. There are now thirty-two members on the roll. The society sometimes holds joint meetings with LA SOCIÉTÉ FRANÇAISE DE BARNARD COLLEGE, an association of the women students in French, organized with the same aim as the Columbia society, which is open only to men. The two societies occasionally unite in the presentation of French plays.

One of the most live departmental societies on the campus is the DEUTSCHER VEREIN DER COLUMBIA UNIVERSITÄT, founded in 1898, under the auspices of the Germanic department. Its object is "to promote the study and appreciation of German literature and of the German language, both written and spoken, to discuss contemporary German events in all fields, to encourage public lectures in German at Columbia, and in general to bring together socially men interested in German affairs." Membership is open to officers of the University and to such students as can read with ease ordinary German, except Freshmen, who are allowed one member only, the *Bierfuchs*. The roll now carries sixteen honorary members and one hundred and thirty-eight active members, of which latter only fifty are, by limitation of the constitution, resident students. The *Verein* meets twice each month in its own rooms in West Hall, which are accessible to members at all times and form not only a place for the regular meetings, but a convenient club and reading-place, which contains a library of five hundred volumes and files of a number of German journals. The society has given a formal *Kommers* to Baron von Holleben, late Imperial German Ambassador; one to Baron Speck von Sternburg, Imperial German Ambassador; one to Professor Karl Lamprecht, of Leipzig, and one to Ludwig Fulda. The *Verein* has entertained in its rooms many prominent guests besides. Among the honorary members are Baron Speck von Sternburg; Baron von Holleben; President Butler; the Hon. Carl Schurz; Karl G. Bünz, Imperial German Consul General; Carl Gneist, Imperial German Consul; Professor Kuno Francke, of Harvard University; Professor Karl Lamprecht; Professor Eugen Kühnemann; Dr. Ludwig Fulda, and Heinrich Conried. At the *Verein* meetings many customs and institutions of German student life are introduced, under the direction of the members who have been at one time or another students at German universities.

The students in German of Barnard College have similarly organized, under the name of DEUTSCHER KREIS, whose aim is part social and part linguistic. The society, which numbers at present fifty-four members, has not, up to this time, played a very large part in the life of the College, having put itself in evidence only through its annual play. This year, however, a movement has been inaugurated for the purpose of arousing a greater interest in the society's doings on the part both of the members of the KREIS itself and of the general student body. As a step toward thus enlarging the society's field of activity, the KREIS, at a recent special meeting, passed a motion providing that, at the six weekly social meetings to be held in the future, short German plays or stories be read by members of the society, in addition to the regular entertainment of the afternoon. It was also decided that two large open meetings be held each year, at which distinguished Germans should be asked to speak.

In the same year with the Deutscher Verein, was organized the ENGINEERING SOCIETY OF COLUMBIA UNIVERSITY, for the purpose of furthering the knowledge of students by securing prominent men to lecture on engineering subjects of interest. This society was, a few years ago, the largest of the departmental societies, and annually published its transactions under title of *The Columbia Engineer*. It is of present interest to note that among the technical papers on engineering problems which appeared in the last issue (1905) of this annual is to be found the report of the Engineering Committee of the Isthmian Canal Commission, of which Professor William H. Burr, head of the civil engineering department, and William Barclay Parsons, '79C., '82S., were members. Professor Burr is an honorary and William Barclay Parsons an associate member of the Society. The Society is at present rather inactive, its energy having been gradually transferred to the later-formed and more specialized Electrical Engineering Society, and Senior Mining Society.

In the fall of 1900, was formed the HOME ECONOMICS CLUB OF COLUMBIA UNIVERSITY, under the auspices of the departments of domestic science and domestic art, of Teachers College. Students in the department of hospital economics are now also eligible to

membership. Among the distinguished guests have been Mrs. Ellen H. Richards, of the Massachusetts Institute of Technology; Miss Grace Dodge, one of the chief agents in the founding of Teachers College; Dr. Edward T. Devine, Schiff professor of social economy in Columbia University and secretary of the Charity Organization Society of New York City; and Miss Maria Parloa, writer on household subjects. All lecturers before the Club, which now has a membership of forty-eight, are tendered an informal reception.

On December 10, 1901, the officers of the Greek and Latin departments formed the CLASSICAL CLUB, with the aim of promoting an interest in classical philology among its members, now numbering sixty. In 1904 the Club was honored with the presence of Professor Ettore Pais, of the University of Naples; and last year the Hon. Horace White was the Club's guest.

About four years ago another departmental organization was established under the name of the PHILOSOPHICAL AND PSYCHOLOGICAL CLUB OF COLUMBIA UNIVERSITY. The method of the Club is to invite prominent outside philosophers and psychologists to address it, and to discuss the addresses in the regular meetings. Some of the lecturers before the Club have been Professor Josiah Royce, of Harvard; Professor G. T. Ladd, formerly of Yale University; Professor Hugo Münsterberg, of Harvard; Professor Wilhelm Ostwald, of Leipzig; Professor E. B. Titchener, of Cornell; Dr. Pierre Janet, of Paris; and Professor James Ward, of Cambridge. The membership is now about forty.

The students of architecture instituted, in 1903, the COLUMBIA UNIVERSITY ARCHITECTURAL SOCIETY. The Society's object is three-fold: The organization of the work of the students so that a year book, recording their work for the year, may be published; the promotion of sociability among the students of architecture by means, primarily, of an annual dinner; and the furthering of any other interests which the students of the department might have in common. The Society now numbers about seventy members.

The following year, in January, Professor G. F. Sever and other members of the department of electrical engineering established the ELECTRICAL ENGINEERING SOCIETY OF COLUMBIA UNIVERSITY.

The Society aims "to increase the technical knowledge of and to foster a scientific and professional spirit among the students in electrical engineering." Toward this end, meetings are held twice monthly, at which papers supplementing the course of the department are presented by prominent graduates or other recognized authorities. There is a standing committee on technical literature, consisting of five members, whose duty it is to report articles of interest in current electrical publications.* The honorary membership includes Professors F. B. Crocker, G. F. Sever, M. I. Pupin, and A. P. Wills. There are one hundred and seven members at present.

An informal and modest organization of instructors and advanced students in the Indo-Iranian department was founded on November 17, 1904, under the name of the COLUMBIA UNIVERSITY INDO-IRANIAN CLUB. Thus far, the instructors and advanced students of the department have *ipso facto* constituted the membership, there being no election for this purpose. The Club meets three times during the academic year, for the purpose of bringing the members together for discussion. Each member either prepares a paper for presentation or gives a preliminary account of some work upon which he is engaged. The Club has, as yet, no honorary members and has had no distinguished guests, and now counts a membership of eleven, two of whom are former students of Professor A. V. Williams Jackson, not now officially connected with the University.

In 1904, also, was founded the BARNARD ZOOLOGICAL CLUB, by the members of Professor Henry E. Crampton's general course in biology. In furthering the Club's object of fostering an interest in zoology at Barnard College, Professors Henry E. Crampton and Edmund B. Wilson have lectured before the Club on zoological subjects. This year, the Club instituted a journal club, which will be described with the journal clubs of other departments. In addition to the seventy-eight alumnae and undergraduate members, there are four honorary members: Miss Laura Gill, dean of Barnard College; Professor Henry E. Crampton, of the zoological department of Barnard; Dr. Livingston Farrand, professor of anthro-

* Several of the other departments of the University carry on this sort of work in separately organized journal clubs, which will be described together.

pology at Columbia; and Dr. William E. Kellicott, of the department of zoology of Barnard.

A year ago the students of Professor Olcott's course in the Satires of Horace invited all the students in the University to join with them in forming a Latin Society, which was a few days later named the *CIRCULUS LATINUS UNIVERSITATIS COLUMBIAE*. The society endeavors to foster and develop a colloquial acquaintance with the Latin language. Thus the specific purpose of the *Circulus Latinus* in no way conflicts with the purely philological aim of the Classical Club of the combined Latin and Greek departments. The society has from time to time been addressed in Latin by University officers of instruction; and the meetings are conducted largely in Latin. There are at present nineteen *socii studentes* and six *socii honoris causa*. The society is, in part, a revival of an older society of the Forty-ninth Street days.

The most recently organized departmental society is the *BARNARD PHILOSOPHY CLUB*, founded in February of the present year. The Club was stimulated into being by the interest which the students of Barnard College found in their undergraduate course in philosophy. The Club, which now numbers twenty-eight regular and two honorary members, has scarcely yet formulated definite plans.

Other departmental societies are the *KINDERGARTEN CLUB* of Teachers College, which stands for social intercourse among kindergarten students and aims to promote interest in kindergarten work; and the *TEACHERS COLLEGE ARTS AND CRAFTS CLUB*, which is temporarily disbanded but purposes soon to reorganize. Some of the societies mentioned elsewhere in this paper are also to be classed as departmental.

ARMOUR CALDWELL

NOTE: The concluding section of this article will be published in the September issue, and will discuss all of the remaining societies, with the exception of the athletic and secret organizations. Mr. Caldwell will be glad to receive an account of any society that has not received a letter of inquiry from him.—Ed.

EDITORIAL COMMENT

For modern civilized states with increasing populations, the development of manufactures and the exporting of goods have become a condition of existence. This involves continually increasing competition

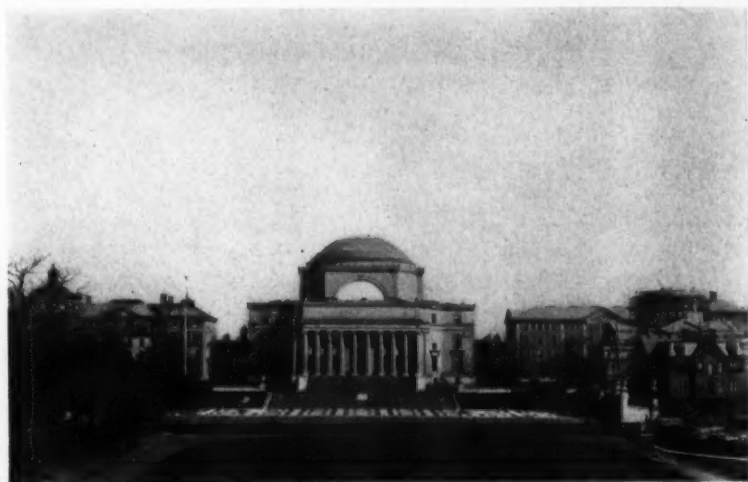
**Training for
Foreign Service**

for markets, particularly in those parts of the world where manufacturing industries have attained little development. Into this competition the United States, with its greater internal resources and its sparser population, was not driven so early as the great West-European states, but of late years this country also has been increasing its output of goods by leaps and bounds, and we are in the thick of the struggle for the markets of the world. To hold the outlets we have gained and to open new ones, it is not enough to offer better bargains than our competitors; we must know where our goods may with advantage be sent, and buyers must be taught to know and value them. For information regarding commercial opportunities every nation relies principally on its consuls. These are no longer men of routine, with little to do except to authenticate invoices and to settle sailors' quarrels; they must study and report on the economic conditions of the countries in which they are stationed; they are the scouts of modern economic war. To grasp the opportunities revealed by an intelligent and active consular service, a new type of commercial traveler has been evolved; and the foreign agent marks an even greater advance over his predecessor, the domestic drummer, than the drummer exhibited over his prototype, the pedler.

By reason of the greater difficulty of their tasks, the modern consul and the modern commercial agent have become specialists, and their training is coming to be a very serious affair. It is of course evident that a consul should understand the organization and operation of the government that appoints him; and he should have so much training in public law and political science as will enable him to understand the structure and working of government in any country to which he may be sent. He must know something of the private law of his own country; and he should have sufficient training in general legal science to make it easy for him to learn what he needs to know of other legal systems. The consul and the unofficial commercial agent alike must be familiar with the resources of their own country, and both must



HARTLEY AND LIVINGSTON



VIEW FROM SOUTH FIELD



know enough of economics to be able to familiarize themselves rapidly with the needs of the country to which they are sent. Both must be well acquainted with political and commercial geography, with the agencies and modes of transportation, with the methods of international exchange and with commercial law and usage. Other branches of knowledge which on first consideration seem hardly necessary are almost equally important. Every successful trader is a practical psychologist; he is able to do profitable business with other men because he knows how their minds work. To deal with men of alien race requires the same sympathetic insight, but to gain it is far more difficult. It will most readily be gained, natural aptitudes being equal, by those who know something of anthropology, of history, of comparative ethics and even of the new science that compares religions. To the consul or commercial agent quick comprehension of alien minds is not the less important because its greatest advantages are negative; for nothing is of greater importance for them than to avoid giving unnecessary and unintended offense. One gets little information from hostile witnesses, and one does not sell goods by alienating buyers.

It must be remembered, moreover, when we think of foreign service broadly, that international intercourse does not begin or end with the exchange of material wares. In the very dawn of commerce, as a brilliant German writer has said, "The ship that carried goods brought back gods." Christian countries have long been exporting Christianity; all civilized countries are now exporting civilization; all, too, are sending out scientific investigators of every description. The missionary of religion or of culture needs above all things sympathetic insight into the foreign mind; and the branches of science that are best adapted to develop this insight are not adequately taught in our colleges or in our theological seminaries: they are university subjects. The scientific explorer, unless he be an investigator of men, has less need of these social sciences; but he needs much of the knowledge which is of prime importance to scouts and pioneers of commerce.

The need of special and advanced training for every branch of foreign service was first recognized in continental Europe; and most of the European states have developed, in connection with their leading universities, special schools for such training which stand on the same plane with the other and older professional schools. Great Britain, which was first in the field of modern commercial competition and which conquered vast markets by simpler methods than those now in vogue, has been slow to recognize the need of such schools; but of late

years Great Britain has become conscious of the formidable character of competition directed by science and conducted by trained experts, and has taken steps to produce experts of its own by other processes than that of natural selection.

In our country, government can not well initiate such an enterprise; democratic traditions and habits stand in the way; the work must be done by organized social effort. The fittest organs for the purpose are our great universities. None of them is yet so broadly equipped as to attempt this new task single-handed. Yale and Columbia have seen their way to undertake it by combining their resources; and if popular support and governmental cooperation are not withheld, the Yale-Columbia courses of training for foreign service will go far to supply this modern and very pressing need.

An intramural adjustment of no small moment is that recently effected between Teachers College on one hand and Columbia and Barnard Colleges on the other, pursuant to the recommendation contained in the President's Annual Report for 1904, in accordance with which the two latter institutions agree to provide the collegiate courses required by Teachers College for admission to its professional curriculum. This is but another step in the direction of the abolition of all unnecessary duplication in the academic work of our University, a process which has been by no means finally completed. In an institution as complicated as the Columbia University of the present—an entity produced mainly not by the organic development of the original body, but rather by the gradual accretion of more or less related elements—we are quite apt to discover a lack of absolute coordination, and this in turn will frequently involve an expenditure of time and labor incompatible with sound economic principles. This fault can be eradicated only by the constant efforts of all parts concerned towards securing a closer unity of academic structure and a more perfect consolidation of the administrative machinery. The manifest improvement effected by the various changes along the lines just indicated, which have been inaugurated in recent years by the several corporations acting in unison, bears out the truth of this assertion.

Inasmuch as the exact position of Teachers College in this matter is not generally understood, a brief comment on its attitude may not be amiss. It does not seem to be generally known that Teachers Col-

lege had developed a two-year collegiate curriculum as an integral part of its work before it became part of the University. This curriculum, however, duplicated only in part the first two years of Barnard College and of Columbia College, modern instead of ancient languages being accepted for admission and no Latin or mathematics being required in the curriculum. The curriculum offered by Teachers College was designed especially to prepare students for admission to the professional curriculums for kindergarten and elementary school work and for the teaching of technical subjects, while the Barnard and Columbia students were, and they are at present, almost exclusively interested in secondary school work, a field that is considerably overcrowded. For this reason Teachers College deemed it wise to continue its collegiate curriculum until an agreement could be reached among the corporations that would make it possible for a Barnard or Columbia student to receive preparation for any professional curriculum whatsoever in Teachers College.

According to the recent adjustment, a Barnard or Columbia student desiring professional preparation for teaching either (a) transfers to Teachers College at the end of three years for one year of residence in the case of secondary school work, or for two years of residence in the case of elementary and technical work, in both instances ultimately receiving the baccalaureate degree from Barnard or Columbia as well as the bachelor's diploma in teaching from Teachers College, or (b) transfers to Teachers College at the end of the second year and receives from the latter institution both the bachelor's diploma in teaching and the degree of bachelor of science. This plan has made it possible to abolish the first two years of collegiate work at Teachers College, as stated above, Teachers College thereby becoming, so far as undergraduate work is concerned, a purely professional school, and emphasis is thus again laid upon the movement to establish two years of collegiate work as the normal preparation for all professional study, a movement in which Columbia has led the way and which bids fair to extend rapidly.

In publishing a sketch of the proposed new athletic field, which it is hoped Columbia at no distant day may possess, it is well to make **The University's Policy** some statement as to the policy of the University toward Athletics with reference to athletics as a whole.

In the first place it should be understood that the authorities of the University are, practically without exception, in favor of collegiate

athletics. They recognize in them a source of physical and mental health and of a sound discipline in self-control and morals. That is the fundamental conviction upon which their policy is based. From this it follows that the widest possible participation of the student body in outdoor sports is the end to be sought. Highly specialized sports in which a very few professionally trained men take part, while the main body of the students sit by and look on, are not desirable. For example, instead of only forty or, at most, sixty highly trained men of unusually heavy weight participating in the game of football as it has been played, the authorities prefer to see developed a game of a character that would allow several hundred men, not necessarily heavy and without undue training, to feel the joy and reap the physical, mental and moral consequences of participation therein. This theory they would apply not only to football, but to all other branches of collegiate sport as well.

This fundamental conviction leads directly to the necessity of providing not only adequate grounds for such a general participation of the student body in all forms of out-door sport, but also a time free from all academic exercises, in order that the grounds may be used. The proposed field is expected to assist greatly in supplying the first need, while the suspension of all work at some not too late hour in the afternoon will provide for the second.

With time and grounds available, it is felt that the next most essential step will be the establishment of a very extensive system of intramural athletics. Only the few can ever participate in intercollegiate contests, whereas the many need the physical stimulation of the delight of field sports, and the moral training that comes of a fair and manly contest. So, whatever action the University authorities have taken or will take regarding athletics looks rather toward an increase in the scope of athletics at Columbia than toward a decrease. And this increase, they believe, can be accomplished without unduly emphasizing athletics at the expense of scholarship, for scholarship always has been and must ever continue to be the main interest of university life. The excesses in intercollegiate athletics, together with the spirit of commercialism originated by gate receipts, have been main factors in bringing about this evil of false emphasis. A wise restriction of intercollegiate contests, and not an abandonment of them, will unquestionably tend to reestablish the proper equilibrium.

One other thing, finally, it is hoped may be accomplished by a system of wise supervision. It is not only to make college sports a method

of recreation, but a school in courtesy and good morals, and not as has been confessedly too often the case, a training in unfairness and brutality, which do not anywhere characterize the gentleman. Least of all should these reversions to our uncivilized ancestors be found among college men, who are supposedly seeking to become partakers of the world's wisdom and the world's tradition of good manners so slowly accumulated in the past.

For the third consecutive season a duly accredited representative of the University has gone the rounds of the alumni associations scattered throughout the country, and his report of the interest shown in

A Peripatetic Chair. Columbia's recent development by the members of the different organizations is most encouraging. It

is only another evidence of the fact that the new spirit which has begun to animate the student body is not confined to Morningside Heights, but that it has infected the alumni, especially in centers where a formal organization flourishes. An account of the meetings will be found under *The Alumni*, yet it may be well to point out here that no less than six new associations were established as a direct result of the journey, two of these being innovations inasmuch as they are located at higher institutions of learning, namely, the Universities of Missouri and of Wisconsin. The fact that there are fifteen persons connected with the former and nineteen with the latter institution who have been students at this University, is testimony of the ever-increasing influence of Columbia graduates in the educational affairs of the land, and due organization will no doubt direct this influence into proper channels. The University can not have too many local alumni associations, and the authorities should not rest content until every large city and all of the leading universities in the country have been provided with strong and permanent organizations.

The advantages accruing from such organizations are too evident to require discussion, but there is one way in which the associations can be of service that has not yet been emphasized. Just as soon as any one of them attains sufficient vigor, it should be induced to display some material evidence of its interest in the University by supplying an annual scholarship for some deserving student hailing from its own locality. No more satisfactory method could be devised for keeping the alumni outside of the University in close touch with the affairs of the University, and the annual visits of the representative of the Alumni Council would thus be supplemented in a most happy manner.

The University should take to heart the statement that one live man is worth a car-load of catalogues. Indeed, it would be a profitable investment to keep some representative of the University constantly in close touch with our graduates. A portion of the time could be devoted to correspondence, which naturally and inevitably would become exceedingly personal and influential, and this could be followed by visitation. It is very pleasant to know that your boy who is just entering the Freshman class has a friend at court, some one who has met him and with whom he has talked, some one who brought you both the very latest word from Columbia. Innumerable and important questions are asked and answered in a personal conference which can not be covered by formal correspondence, and the drawing power of the personal relations thus established can scarcely be estimated. Garfield once said that a kind word from President Hopkins made him a student at Williams. The minor institutions understand perfectly well the value of such a representative, as is shown by the fact that many of them keep such officers constantly employed.

The work of Columbia is too large, its interests are too great, its influence is too varied, to be entrusted entirely to catalogues, announcements, reports, and other printed material. The University may well discuss the advisability of appointing a representative officer who can carefully and constantly study the entire situation, and whose personality and power will be commensurate with the opportunities and possibilities of his position.

The recently published announcement of the summer session includes a number of new and interesting features, the most striking of which is perhaps the great development in the field of graduate work. This is simply a natural response to a growing demand not to be disregarded by the authorities, inasmuch as the extension of privileges in this direction has always been met by an increased attendance of students fully qualified to take advantage of the opportunities offered. The history of the summer session at Columbia is marked by a steady growth in graduate work. In 1900 four departments—education, English, philosophy, and psychology—offered altogether nine courses that might be regarded as graduate in character, whereas in the coming session no less than forty-three courses, distributed among sixteen departments, will, upon satisfactory completion, be credited towards the degree of master of arts. During the past six years, attendance on the summer term did not

actually form part of the residence of a candidate for the master's degree, but involved merely a relief from one or possibly two hours per week of work during one academic year, the required period of residence. In other words, summer study at the University satisfied in some small degree the requirements of the departments concerned with regard to attainment, but not with respect to time of residence. The inconsistency of this position on the part of the University became more apparent as the opportunity for graduate work increased. It is, therefore, exceedingly gratifying to note that the committee on higher degrees has met the difficulty by its new regulations, published in the announcement of the summer session for 1906. These regulations, while carefully guarding the master's degree, allow the student to count attendance in four consecutive summer sessions, or two summer sessions and an intervening or following term, as fulfilling the requirements for residence. Inasmuch as permission is given to pursue graduate courses of one hour a day in addition to those requiring two hours, no difficulty will be experienced in meeting the demands of the departments as to attainment in the period of time now recognized as residence. In actual experience it has been found that students drawn to the University by the offer of graduate work in the summer frequently remain during the academic year, so that the growth of the summer session is coincident with a growth in the number of students enrolled in the graduate faculties, and the University year tends more and more to become a calendar rather than an academic year.

Not many men have an opportunity to do as much useful and responsible work for their *alma mater* in the three years following graduation as Mr. R. A. Meyers, 1902, who has just resigned the secretary-

Resignation of ship of the Committee on Employment for Students
Mr. Meyers and of the Appointment Committee, in order to enter upon a position with the New York Telephone Company.

The account in the March *QUARTERLY* of the results attained by the committee bears eloquent witness to the resourcefulness, intelligence and devotion of the man who had the work in charge. In addition to the actual securing of employment, Mr. Meyers was able, by reason of intimate contact with a large portion of the student body, to be of great assistance to many a student as a friend and unofficial counselor. Mr.

Meyers has the best of wishes, from officers and students alike, for success in his new work.

As Mr. Caldwell points out in the introductory paragraph of his article on student organizations at the university, many readers of the *QUARTERLY*, especially those alumni familiar only with the Columbia

Student of the Forty-ninth street days, will no doubt be
Organizations astonished to learn of the remarkable and eager activity that has been exhibited since the removal to Morningside Heights by the student body, as well as by the various departments, in the matter of the establishment of societies and clubs of one sort or another. Not only have these organizations exercised a most pronounced influence in the development and dissemination of a true college spirit, but a considerable number of them have also performed the important function of bringing student and instructor together in a purely informal atmosphere. The criticism, so frequently heard, that no opportunity is afforded to the student of a large university to come into social contact with his instructors, is thus coming to be less and less applicable to our own institution, and the problem of combining academic business with pleasure finds here a happy solution.

It is evident that by reason of the difficulty of getting at all the facts, an article of this nature will be likely to be incomplete, and additions or corrections will therefore be gratefully received by the author.

Since the article concerning the activities of University officers was in print, a most excellent illustration of the value of Columbia to the non-academic world is to be found in the extraordinary service rendered by Edward T. Devine, Schiff professor of social economy, in connection with the Red Cross Society, in behalf of the sufferers at San Francisco. Both the telegrams to the public press, and private letters, testify to the efficiency and energy and wisdom shown by Professor Devine in perfecting the reorganization of the general relief society, at a time when the entire population of that ill-fated city was in sore need of aid.

THE UNIVERSITY

The announcement of the courses offered by Yale University and Columbia University in cooperation for students desiring training for foreign service has been issued, and the general features of the scheme

Training for
Foreign Service

are doubtless familiar to the readers of the QUARTERLY. The project has the hearty approval of both

the Secretary of State and the Secretary of War. Students may be registered primarily in either institution; they may attend both institutions during the same half-year, or may be in residence at either in alternate half-years. Ordinarily the courses are intended for graduate students, but well qualified undergraduates with two years of collegiate work to their credit may, under suitable circumstances, take advantage of the training offered by these courses and at the same time count them toward the first degree. The course for consular service leading to a certificate, signed by the presidents of both universities, will occupy three years; for other foreign service in special fields the course will be two years. The full program includes seven divisions, namely, languages, geography, ethnology, history, religions, economics and law, the following subjects being prescribed for the consular certificate: Two languages besides English, commercial geography, elementary statistics, trade statistics, commerce and commercial policy, elementary law, Roman law, commercial law, international law, history of diplomacy, and seven other courses to be approved by the committee on instruction.

For North and South America, besides the subjects mentioned before, history of Spanish America. The two required languages besides English may be selected from the group, Spanish, Portuguese, French.

For the Levant, in addition to the subjects mentioned before, modern Asiatic history. The two required languages besides English may be chosen from Italian, Arabic, Turkish, or, in special cases, Syrian, Armenian, Persian.

For Eastern Asia, history of China. As an additional language, Chinese.

The certificate for other foreign service is the same, with the exception that Roman law, international law, and the history of diplomacy are not required, and only five additional courses instead of seven need be taken.

While most of the divisions of knowledge required for this work are well covered either at Yale University or Columbia University, or at both, the tender to be thoroughly effective needs more courses in political geography, Mohammedan law, and in Japanese and Slavic languages. In all branches, also, courses with specific regard to South America are urgently needed.

Columbia's contribution to the tender is fifty half-yearly courses, the total number of hours being ninety-three. The teachers include Professors Loiseaux, W. H. Carpenter, Gottheil, Prince, Jackson, Hirth, Kemp, Dodge, Farrand, Boas, Shepherd, Simkhovitch, John Bassett Moore, H. L. Moore, Seligman, Munroe Smith, Goodnow and Burgess.

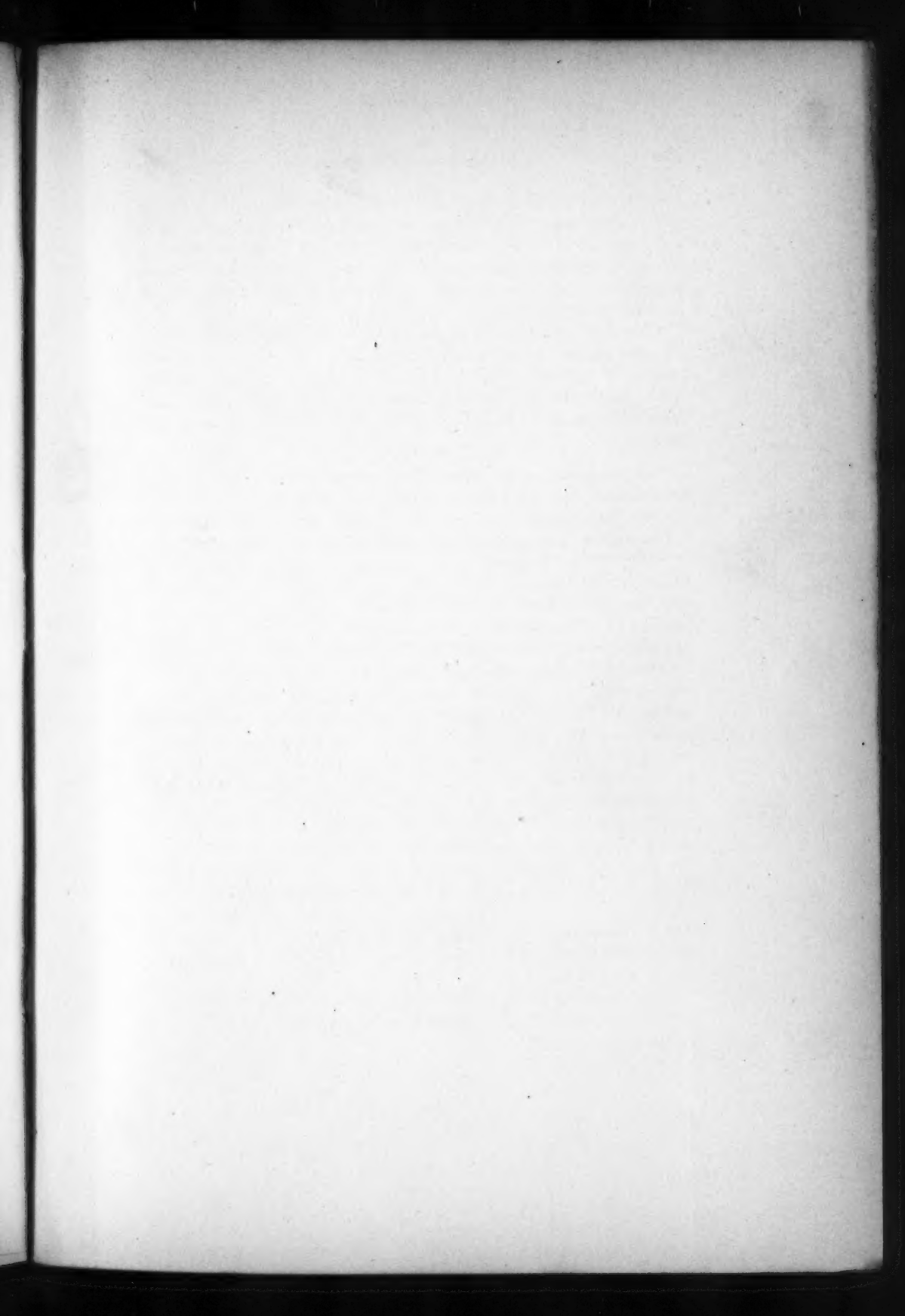
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The publication of the report of the committee of alumni appointed to investigate the possibility of securing an athletic field for the University was eagerly awaited by the students and alumni alike, the

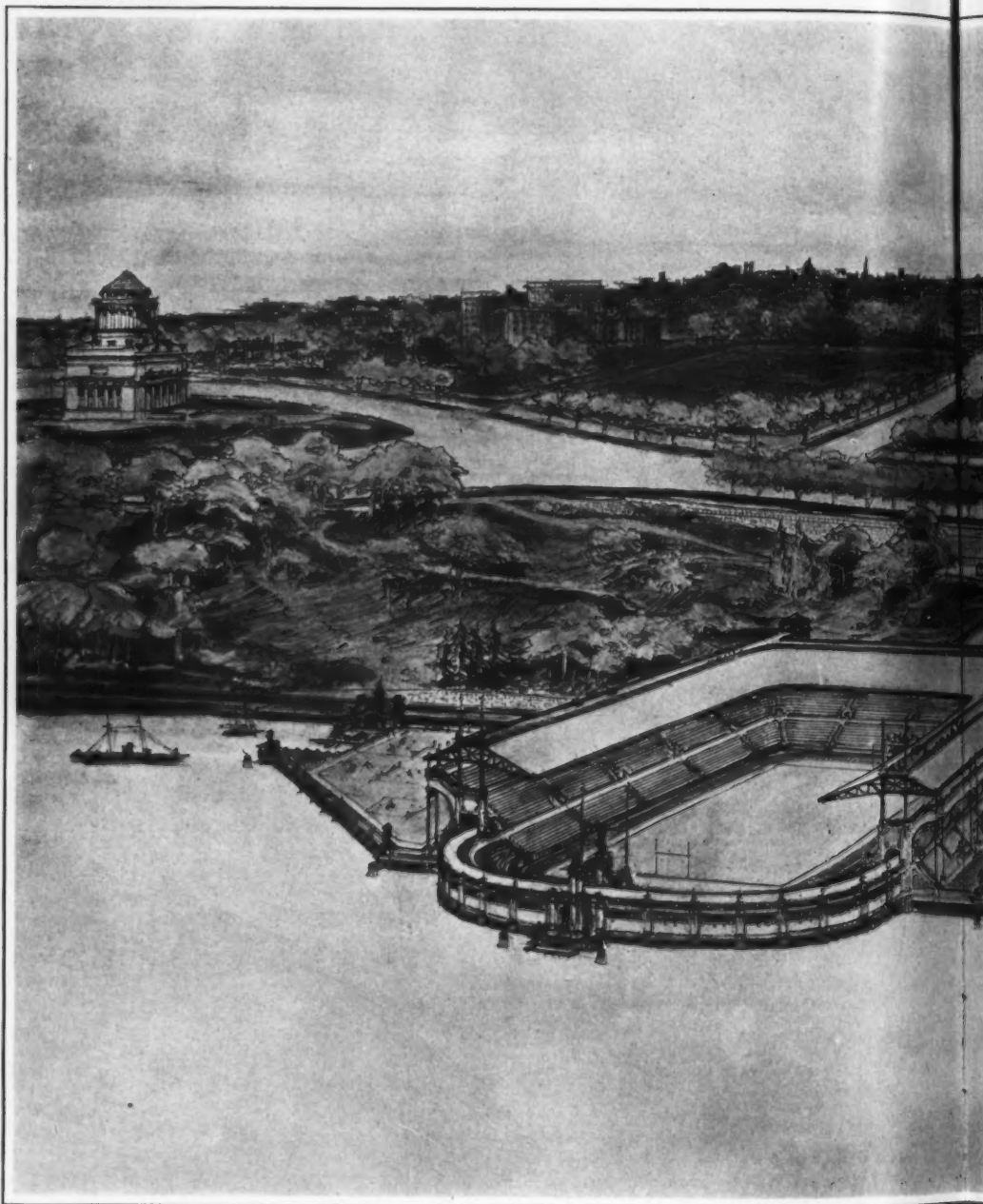
**The Proposed
Athletic Field**

intimation that a field of suitable size could possibly be found within less than half a mile of the Library Building having been received with polite incredulity. The committee, consisting of William Barclay Parsons, '79, George L. Rives, '68, Daniel LeRoy Dresser, '89, with the cooperation of Gustavus T. Kirby, '95, and Henry G. Hornbostel, '91, has made the following proposal: To fill in the shallow bed of the Hudson as far as the pier head from one hundred and sixteenth to one hundred and twentieth streets and to establish on the land thus created three athletic fields, with a permanent stand for the central field to be used also as a public recreation center. While Columbia is expected to find the necessary money for the work, about one million dollars, the plan is one which will benefit not only the University but the whole community. The architectural features of the plan include a water-gate for the reception of distinguished visitors, something which New York has long needed. The equipment for athletic sports, furthermore, is to be used not only by the students of the University but for intercollegiate and interscholastic contests generally and for amateur championships—in no case is admission to depend upon an entrance fee, so that the whole system of gate receipts with its attendant responsibilities and dangers is to be eliminated.

A bill granting the necessary permission on behalf of the State has already been passed by the legislature and approved by the mayor and governor.



GRANT'S TOMB

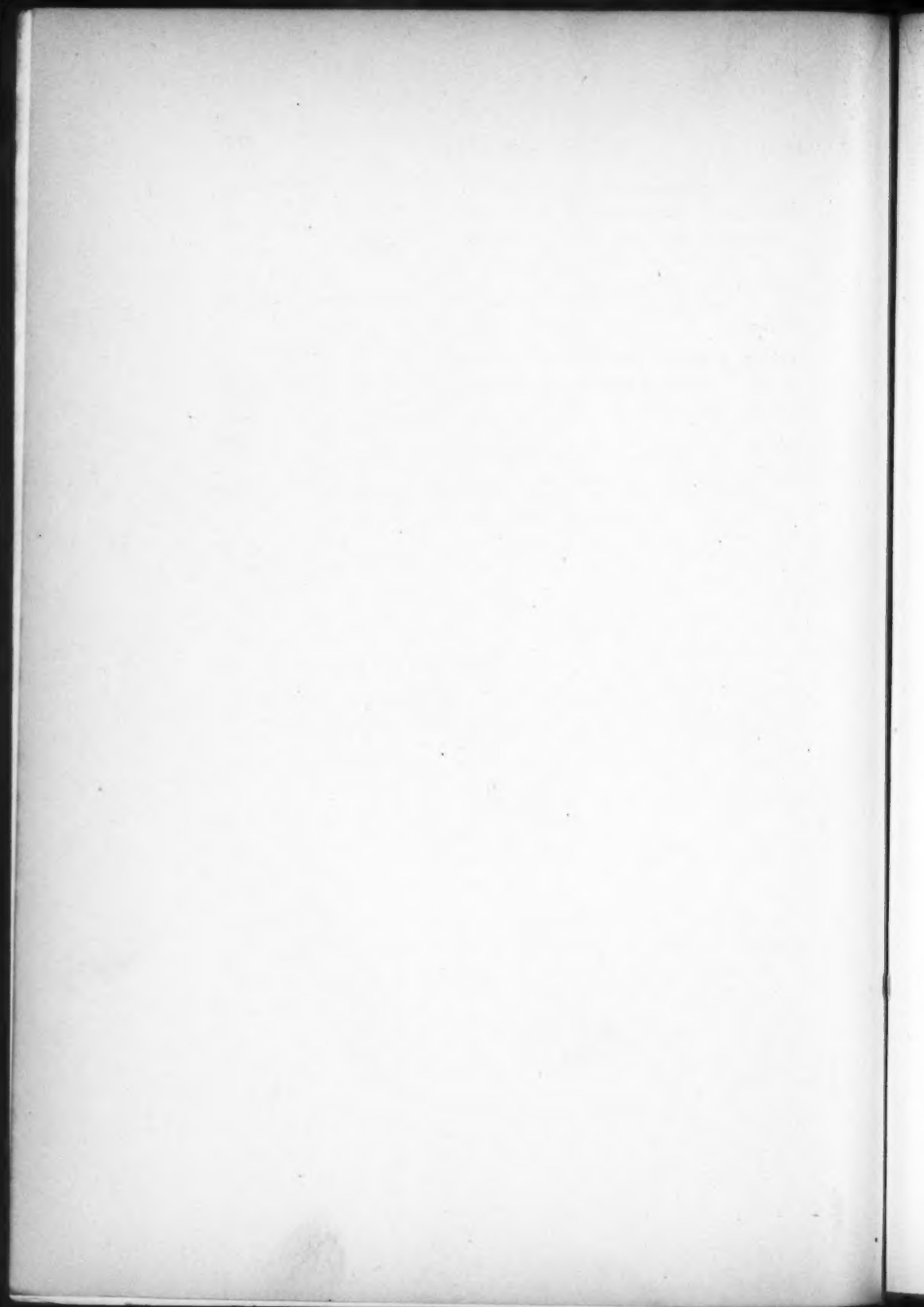


PROPOSED ATHLETIC STADIUM

COLUMBIA UNIVERSITY



D ATHLETIC FIELD



In recognition of the personal interest evinced by the German Emperor in the establishment of the Roosevelt professorship, the Trustees have prepared and had printed an address to the German Emperor, which has been handsomely bound with a copy of the history of the University, and has recently been presented through the German Ambassador. The address reads as follows:

TO HIS MAJESTY THE GERMAN EMPEROR:

The Trustees of Columbia College in the City of New York beg to express their admiration for the broad and progressive views entertained by Your Majesty as to the essential unity of purpose of all institutions of higher education of whatever country, and as to the influence which such institutions should exert upon the development of a better mutual understanding and a closer sympathy between nations.

As a step towards the advancement of these views, the Trustees have cordially approved and ratified the agreement between the Prussian Government and Columbia University, executed on August 14, 1905, at Wilhelmshöhe, on behalf of the University by the President of the University and the Dean of the Faculty of Political Science, providing for an interchange of systematic instruction upon the history and institutions of Germany and the United States of America, respectively, at Columbia University and the University of Berlin.

In so doing, the Trustees desire especially to express to Your Majesty their appreciation of your personal interest and gracious consideration manifested in thus placing the scholarship of Germany and America within the reach of students in both countries, and they beg to tender to Your Majesty their thanks for the service so rendered to the diffusion of sound learning and the promotion of that mutual understanding which is most conducive to good feeling between nations.

By order of The Trustees of Columbia College in the City of New York, this second day of October, 1905.

GEORGE L. RIVES, Chairman

JOHN B. PINE, Clerk

NICHOLAS MURRAY BUTLER, President

* * *

On the occasion of the celebration of the two hundredth anniversary of the birth of Benjamin Franklin, held at Philadelphia, April

Franklin Bicentennial

17-20, 1906, the University presented the following memorial to the American Philosophical Society:

Columbia University presents greetings and congratulations to the American Philosophical Society upon the Two Hundredth Anniversary of the birth of the Founder of the Society. Recognizing the eminent services of Benjamin Franklin to the advancement of education, the

encouragement of scientific research and the cultivation of higher thought, it is but fitting that this occasion should be honored by all institutions of learning, and more especially by the University which has succeeded the College founded and first presided over by Samuel Johnson, the contemporary and friend of Franklin. King's College and the American Philosophical Society, coming into existence almost simultaneously, were alike imbued with a broad and philosophic conception of their obligation to contribute toward the enlightenment of the new world.

The Society, in cherishing the sacred flame which was lighted upon its altar by its founder, has worthily perpetuated his memory; and in respectful appreciation of the results which the Society has accomplished throughout its long and distinguished history towards the advancement of philosophy and science, and towards the attainment of the noble ideals for which it was established, the University offers its cordial felicitations.

* * *

In the December issue of the *QUARTERLY* an analysis of the occupancy of Hartley and Livingston Halls was given as of November 1. At that time 172 rooms in Hartley and 170 rooms in Livingston Hall,

Hartley and Livingston making a total of 342 rooms, had been rented to 296 students. Since that date considerable progress has been made towards filling the halls completely, the statistics for the end of April showing that 204 rooms in Hartley Hall and 196 rooms in Livingston Hall, giving a total of 400 rooms, had been rented to 351 students, who are distributed by schools as follows:

Faculty	Hartley Hall	Livingston Hall	Total
Columbia College	48	11	59
Applied Science	27	56	83
Architecture	11	9	20
Law	37	48	85
Medicine	5	2	7
Pharmacy	7	—	7
Political Science, Philosophy and Pure Science	24	18	42
Teachers College	14	15	29
Officers	5	12	17
Miscellaneous	—	2	2
Total	178	173	351

* * *

The following figures show the effect of the new regulation in Columbia College with regard to penalty for low standing and extra

credit for high standing, which was applied for the first time in the mid-year examinations:

52 students received 2 D's*
 13 " " 3 "
 3 " " 4 "
 1 student " 5 "

12 students received 2 A's
 15 " " 3 "
 6 " " 4 "
 4 " " 5 "
 6 " " 6 "
 1 student " 7 "

*The graduating class is not included in this table.

It is perhaps a little too early to draw any conclusions from the above figures with reference to the efficacy of the new rules, but the QUARTERLY hopes to make in the near future some editorial comment on this subject based upon the results of the May examinations.

* * *

The distribution by faculties of the applications for the higher degrees received in April of this year is shown in the following table:

School	A.M.	Ph.D.	LL.M.	Total
Political Science	49	17	2	68
Philosophy.....	111	15		126
Pure Science.....	29	16		45
Total.....	189	48	2	239

Sixty-eight degrees have been awarded in the corporation since the Commencement of 1905, distributed as follows: A.B. 16, LL.B. 1, C.E. 5, E.E. 2, E.M. 13, Mech.E. 2, B.S. (Arch) 2, A.M. 10, Ph.D. 15, LL.D. (honorary) 2.

* * *

It is fortunate that in their search for a permanent chaplain the Trustees were able to find a man who, in addition to the other qualifications for the post, has an insight into life here that can come only from having lived the life of an undergraduate in Columbia College. Mr. Stein entered Columbia in 1888 and graduated with honor in 1891. He not only had a high rank in scholarship—he is a member of Phi Beta Kappa—but he also took a prominent share in various undergraduate activities. He was a member of the Delta Phi fraternity, the Philolexian Society, the Dramatic Club and the Junior Ball Committee, and he served as treasurer of his class in his junior and senior years. He is an active member of the College Alumni Association. From the College Mr. Stein went to the General

Theological Seminary, graduating in 1894. His work as clergyman includes experience under Dr. Rainsford at St. George's Church, New York, and parish work at Cincinnati, Ohio, at Colorado Springs, Colo., and at Fitchburg, Mass.

THE LIBRARY

On the first of February the librarian found it possible to transfer the periodical reading-room from the basement to the north-east corner of the first floor of the library—a most welcomed change. The new room is light, well aired and attractive in every way; the pleasing contrast with the old being abundantly established by the increased attendance and much larger use of the room.

The constantly increasing demands upon Dr. Simkhovitch as bibliographer have long made it desirable that he should be freed from the details of library work if possible; and these demands became so imperative that on February sixteenth the librarian personally assumed charge of the serial department (which includes all binding), thus permitting Dr. Simkhovitch to give a much larger portion of his time to the assistance of officers of the University in connection with the selection of books, the suggestion of bibliographies for advanced students, the direction of graduate students in the preparation of theses and dissertations, and other similar bibliographic work. It is understood that he is now the bibliographer to the University at large as well as to the library.

The library is unpacking and putting in place the very valuable collection brought together by Mr. Henry Livingston Thomas, for thirty years chief translator of the Department of State, Washington, D. C., given to Columbia by his son, Dr. William S. Thomas. Many of these titles duplicate authors already on our shelves, and by this very duplication have already become a great help to undergraduates. Indeed, the greater readiness with which the library is able to meet the undergraduate demands by reason of this duplication has been a very convincing proof of the desirability of such duplication wherever funds will permit.

The new shelving in the stack room, commonly known as 113, is being rapidly filled with sections of the Library brought back from remote portions of the building and made more immediately available than for the last two years. The use of this shelving has also done much to relieve undue pressure in the seminar rooms, and the various collections there are assuming shape again. Out of the confusion caused by the over-crowding of the library and the lack of proper shelv-

ing, order is coming—to the great relief and satisfaction of all concerned.

The Law Library has been carefully rearranged, and is in much better order than for the last two years at least. The stacks and shelves have been carefully labelled, and the books are now entirely available. This is especially gratifying to those who have direct access to the stacks, and has been peculiarly helpful to the editors of the Law Review. This publication now has its office in the room recently vacated by the periodical department, which opens directly off the law stack room, adding greatly to the convenience of the editorial board.

Pierre Bayle, author of the "Historical and critical dictionary," and known in his day as an ardent student, with extensive erudition, unusual critical power, fluent in speech, and with a light skeptical spirit—is not known to have left any extended collection of unpublished or manuscript matter. The library considers itself fortunate, therefore, in having secured recently a unique series of a hundred and fifty letters, written by Bayle between the years 1670 and 1700. Most of these are of considerable length. There are interesting references to other eminent authors, notably Molière, Basnage, Jurieu, Descartes, Christina, queen of Sweden—and some historical notices of King James II, William III, etc. The letters are bound in a single volume and constitute a very desirable addition to the number of rarities steadily though slowly increasing in the library.

The Avery Library has recently received several notable additions. From Mr. Avery, whose continued interest in the collection has been most encouraging, have come *Editorials and Resolutions in Memory of Samuel Putnam Avery*, privately printed; Fénaile (M), *Etat général des tapisseries de la manufacture des Gobelins-dix-huitième siècle*; and Cain, *La Collection Dutuit, Histoire de la collection*, 2 vols. fol. This last is a remarkably satisfactory and thorough treatment of the famous collection now housed in the Petit Palace des Beaux Arts. The *Collection Dutuit* is uniform with the *Mobilier royal français* and *Treasures and Masterpieces of Art at the Paris Universal Exposition*, already in the Avery library. These fine books are an inexhaustible treasury of suggestion and inspiration to the designers of New York, who are allowed to use them freely.

In the distribution of the great *Investigations and Studies in Jade* at the Metropolitan Museum, Columbia University was remembered. This book suggests an interesting return to conditions in the thirteenth century, when a fine book was made at enormous expense, placed pre-

cisely where it was most wanted, and kept there. Like the Dutuit collection, this book is a mine of suggestion for practical people. The Bishop estate has also given to the library the fine catalogue of the sale of Mr. Bishop's collections. For both these books the library is indebted to Mr. Ogden M. Bishop, a son of Mr. Heber R. Bishop, and a recent graduate of the architectural department.

Mr. J. Pierpont Morgan has presented to the Avery library the *Catalogue of the Morgan Collection of Chinese Porcelain* at the Metropolitan Museum. In this the attempt has been made to create a volume which shall be monumental, but at the same time not unreasonably large or expensive.

Interesting books have been bought with the Avery fund in the usual way. We may note a Foucher: *L'art gréco-bouddhique du Gandhâra*; Streit, *Das Theater, Untersuchungen über das Theaterbauwerk bei den klassischen und modernen Völkern*; Lanciani, *Storia degli scavi di Roma, e notizie intorno le collezioni romane di antichità*; Nicoletti, *Illustrazione della chiesa e scuola di S. Rocco in Venezia*.

Professor A. V. W. Jackson has presented to the Avery a copy of the *History of the Art of Writing*, by Henry Smith Williams—quite unique in its way.

FACULTY OF MEDICINE

General.—During the year 1905-06 thirty-nine partial scholarships were awarded.

Drs. L. W. Hotchkiss, J. C. Ayer and A. S. Vosburgh have received appointments as attending surgeons on the first surgical division of Bellevue Hospital.

Graduates of the College of Pharmacy, who possess the degree of pharmaceutical chemist and have obtained the medical student's certificate that is required by the State, will hereafter be admitted to the College of Physicians and Surgeons without special entrance examinations.

During the past five years there has been a gratifying increase in the percentage of students holding College degrees, the figures for this period being as follows: 1901-02, 35.59; 1902-03, 38.42; 1903-04, 41.52; 1904-05, 46.36; 1905-06, 51.40. Two hundred and twenty students with degrees have been present during the present session.

During the coming summer session twenty-six courses will be offered by thirty instructors in applied therapeutics, clinical pathology, dermatology, genito-urinary diseases, gynecology, laryngology, medical

diagnosis, neurology, obstetrics, ophthalmology, orthopedic surgery, otology, surgery, and technique of microscopic pathology. The courses will be given in the Vanderbilt Clinic, Sloane Maternity Hospital, Roosevelt Hospital, Bellevue Hospital, Presbyterian Hospital, the New York Eye and Ear Infirmary and the pathological laboratory of the College.

During the session just closing the following special lectures have been offered to the students, attendance on which has been optional: One lecture by Dr. L. L. Seaman on "The medical lessons to be learned from the Japanese war"; two lectures by Dr. John G. Curtis on "The functions of the nervous system as viewed before the discovery of the nerves"; one lecture by Dr. Hermann M. Biggs on "The activities of the New York Health Department"; two lectures by Dr. Simon Baruch on "The theoretical considerations of hydrotheraphy," and four lectures by Dr. Brandreth Symonds on "Medical examination for life insurance."

The record of cases treated at the Vanderbilt Clinic during 1905 is as follows:

Department	Number of Patients	Number of Visits
Medicine.....	14,026	43,320
Surgery.....	4,575	21,600
Orthopedic Surgery	1,018	6,861
Neurology.....	2,284	9,521
Gynecology.....	2,772	10,177
Ophthalmology	4,721	13,967
Laryngology.....	4,279	13,091
Otology.....	1,637	6,170
Dermatology.....	3,745	11,325
Diseases of Children.....	3,723	9,888
Genito-Urinary diseases.....	2,575	10,672
Total.....	45,355	156,792

There was an increase of 2,360 in the number of patients and of 11,787 in the number of visits, as compared with 1904.

The Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons were given at the Academy of Medicine in January and February by Baron Kanehiro Takaki, ex-Surgeon General of the Imperial Japanese navy, on "Military and naval sanitation." Baron Takaki comes from one of the Samurai families of the Satsuma clan, from which came also Generals Oyama, Kurobi, Nogi and Nodzu and Admirals Togo and Kammura. He was commissioned by his Government to study medicine in England, where he graduated from

St. Thomas's Hospital with honor and won the degrees of F.R.C.S. and F.R.C.P. On his return to Japan he organized efficient sanitary and medical systems for the navy. He made a special investigation of beriberi, which was very prevalent in the navy, and after years of effort succeeded in reforming the dietary and sanitary regulations so as almost entirely to eliminate the disease. He was promoted rapidly from one position to another, reaching finally the rank of surgeon-general of the navy. After the war between Japan and China, in recognition of his services, he was created a baron. He has held many positions of activity and honor. At present he is a member of the House of Peers of the Japanese Parliament, to which he was nominated by the Emperor, and he is also in the naval reserve.

The list of the successful candidates from this school at the spring examinations for hospital positions is appended. Unless otherwise stated the hospitals mentioned are in the City of New York.

Bellevue Hospital, fourth division—J. C. Wooldridge, F. W. Rice, R. O. Baker, A. L. Slocum. Alternate: W. T. E. Elmendorf.

Bellevue Hospital, P. and S. division—W. T. E. Elmendorf, Henry C. Sears, Murney E. Lewis, D. S. Conley, L. S. Bartlett, M. Osnato. Alternate: C. A. Ross.

Bridgeport Hospital, Bridgeport, Conn.—De Ruyter Howland, S. R. Titsworth.

Brooklyn Hospital—F. H. Lasher.

Bushwick Hospital, Brooklyn—A. C. Holzman.

City Hospital, Blackwell's Island—L. Casamajor, A. K. Detwiller, A. P. Evans, L. B. Groeschel. Alternate: L. Hart.

Englewood Hospital, Englewood, N. J.—T. R. Love.

Faxton Hospital, Utica, N. Y.—Sterling Barrows.

Fordham Hospital—B. S. Bickelhaupt. Alternate: L. B. Groeschel.

French Hospital—J. Y. Porter, Jr.

General Memorial Hospital—W. J. Denno, P. W. Kimball. Provisional: H. W. Moeller.

General Memorial Hospital, New London, Conn.—W. D. Sherwood.

German Hospital—S. L. Spiegelberg, S. S. Friedman. Alternate: E. F. Letwith.

German Hospital, Brooklyn—M. W. Henry.

Gouverneur Hospital—R. M. Macrae, C. A. Birdsall.

Harlem Hospital—A. T. Rossano, H. A. Fischer, A. C. Ross. Alternates: E. T. Ray, H. L. Day.

Hudson Street Hospital—E. E. Stewart, E. J. Kibbe, E. C. Burrows.

J. Hood Wright Hospital—R. P. Huyck, E. T. Ray.

Kings County Hospital, Brooklyn—F. A. Johnson.

Lincoln Hospital—W. G. McConnack, Jr., M. D. Sullivan.

Methodist Episcopal Hospital, Brooklyn, N. Y.—E. T. D. Howell.

Alternate: Lesser B. Groeschel.

Montefiore Home—D. Felberbaum, L. K. Henschel.

Mt. Sinai Hospital—Internes: Charles Ryttenberg, Abraham Hyman, Joseph Rosenthal, Isador Rubin, A. E. Jaffin, H. E. Lindeman, Max Shayer, F. G. Oppenheimer. Externes: S. S. Friedman, M. C. Pease, O. Fine.

New York Hospital—S. Stewart, C. J. Harbeck, E. D. Truesdell, W. G. Wood.

New York Lying-In Hospital—E. J. Kibbe, Max Shayer. Alternate: M. Osnato.

New York Skin and Cancer Hospital—R. M. Vermilye.

Newark City Hospital—O. A. Mockridge, C. E. Selvage.

Norwegian Hospital, Brooklyn, N. Y.—W. H. Bayles, C. F. Stratmann.

Orange Memorial Hospital, Orange, N. J.—H. B. Harris.

Paterson General Hospital, Paterson, N. J.—William Spickers, Jr., C. F. Ehrhardt. Alternate: C. H. Pratt.

Penitentiary, Blackwell's Island—A. L. Smolen.

Post Graduate Hospital—F. S. Wright, H. L. Lewis.

Presbyterian Hospital—E. F. Dubois, George Draper, A. C. Burnham, E. D. Watkins, J. A. Corscaden.

Rhode Island Hospital, Providence, R. I.—L. G. Walling.

Roosevelt Hospital—W. E. Drennen, Hugh Auchincloss, J. T. Harrington, J. F. Sammis, D. Gordon, S. L. Smith, J. E. Engelson.

Samaritan Hospital, Troy, N. Y.—William R. Lee, Jr.

St. Barnabas' Hospital, Newark, N. J.—W. D. Minningham.

St. Catherine's Hospital, Brooklyn—Edward A. Fleming.

St. John's Hospital, Yonkers, N. Y.—E. C. Butler.

St. Joseph's Hospital, Paterson, N. J.—Earl Willis Kohler.

St. Luke's Hospital—C. C. Lieb, W. H. Merriman, J. Casper, C. E. Vail, E. C. Lyon.

St. Mark's Hospital—J. J. Lundsman.

St. Mary's Hospital, Brooklyn—E. T. McNulty, W. A. Gillen, Jr.

St. Vincent's Hospital—W. A. Shea, P. L. McKallagat, M. J. Lawlor, W. P. Strain.

Sydenham Hospital—Max Lederer, D. A. Singer. Substitutes: S. P. Sobel, Charles Phillips, A. C. Holzman, D. Felberbaum.

Washington Heights Hospital—Max Bernstein.

Westchester County Hospital, East View, N. Y.—De Ruyter Howland.

Williamsburg Hospital—S. D. Abrams, R. R. Westover. Alternate: C. F. Stratmann.

Workhouse and Almshouse Hospitals, Blackwell's Island—A. D. Eisenberg.

Department of Anatomy.—The examinations in practical anatomy which have been required by first and second year men for many years have now been discontinued, except for candidates for advanced standing. The work in the dissecting room will hereafter be credited.

Department of Genito-Urinary Diseases.—During the academic year Professor Hayden has given one clinical and didactic lecture a week at the Vanderbilt Clinic, demonstrating a large number of selected cases to the class. At Bellevue Hospital once a week Professor Hayden has held an operative and bed-side clinic, the students witnessing operations and being required to examine patients in the ward and to hand in written reports embracing the diagnosis and treatment of their cases. The chief of clinic, Dr. Whiting, has conducted the section teaching at the Vanderbilt Clinic three times a week, and here also the student is allowed to examine and treat cases under the personal guidance of Dr. Reynolds. The equipment of the department has been brought up to date by the addition of a formaldehyde gas sterilizing apparatus for instruments and a complete cystoscopic and ureteral catheterization outfit.

Department of Laryngology.—Owing to the increase in the number of patients coming under the care of the department, it has been necessary to increase the number of clinical assistants. This has been done by the appointment of Dr. Charles Osgood, class of 1903. Increased facilities for working have also been added to meet the extra demand. Dr. John McCoy of the clinical staff resigned to accept the position of instructor at the University and Bellevue Hospital Medical College. Dr. Walter F. Chappell has been appointed to a clinical professorship of laryngology. The usual mode of instruction has been carried on during the year, consisting of weekly lectures delivered during the last

half of the session by Professor Simpson, and the sectional teaching under the charge of Dr. Samuel W. Thurber, chief of clinic, and Dr. Richard Frothingham, instructor.

Department of Obstetrics.—An out-door service in obstetrics has been established for the session of 1906-07 at the Vanderbilt Clinic, with Professor Painter in charge.

Department of Orthopedic Surgery.—Dr. Jaeger contributed the orthopedic chapter to the recently published work by Dr. A. Caillé on "Differential diagnosis and treatment of disease."—That the work of the department is steadily increasing is shown by the record of attendance of patients. During the year 1904 there were 5,276 visits, while during 1905 there were 6,861 visits.—The department contributed an exhibit to the tuberculosis exhibition held during the past winter at the Natural History Museum.—The lateral curvature class has secured a larger room and increased equipment to accommodate the rapidly growing number of patients seeking this treatment.

Department of Pediatrics.—During the past year but few changes have been made in the general system of instruction in this department. There has been a slight diminution in the work of the third year and an expansion of that in the fourth. Professor L. Emmett Holt as usual gave weekly clinical lectures in the Vanderbilt Clinic throughout the first half of the academic year and during the second half gave didactic lectures upon "The acute infectious diseases." In addition Professor Holt has given on Tuesday and Friday afternoons, to sections of twenty to twenty-five men, bedside clinics at the Babies and N. Y. Foundling Hospitals.

At the request of the third and fourth year classes the clinical lectures at the Vanderbilt Clinic were continued throughout the year, Dr. L. E. La Fetra and Dr. F. S. Meara dividing the remaining half of the year between them. Dr. La Fetra taught the third year class as before at the Vanderbilt Clinic, each section receiving instruction three times a week for four weeks. The object has been to drill the men in the recognition of the physical signs of disease in children and the differences from those in adults. Recitations for the third year students were held during the first half of the year by Dr. Meara.

The bedside clinics in infectious diseases were much interfered with during the past year on account of changes made in Willard Parker Hospital and the building of the new Scarlet Fever Hospital. The teaching of diphtheria was especially interfered with, but fortunately

this ground had been rather thoroughly covered the year before. It was necessary to use the Reception Hospital for diphtheria patients, and these were few in number. Beginning with April first, however, the Willard Parker Hospital is again in running order and instruction has been resumed as in previous years. Drs. H. W. Berg and John Howland have charge of the teaching of infectious diseases, dividing the class between them. They each teach twice a month at East sixteenth street and once, sometimes twice, at the Riverside Hospital at North Brothers' Island. It has not been deemed best to continue the teaching of third year students in infectious diseases, consequently the fourth year students alone have received this instruction.

During the summer of 1905 a number of third year students and a few graduates in medicine assisted in the work in pediatrics in the Vanderbilt Clinic. Arrangements have been made for similar opportunities during the coming summer. The classes at the Clinic have gradually but constantly increased in number and it has been found necessary from time to time to increase the corps of clinical assistants.

Department of Physiological Chemistry.—Considerable research activity has recently been shown, under the guidance of Professor Gies, by the workers in this department. Dr. N. B. Foster is continuing his investigation of the effects of different diets on resistance to pathological influences. He is also making a study of certain chemical factors concerned in the production and treatment of diabetes. Dr. William Salant is actively engaged in studies of glycogen metabolism and biliary secretion. Dr. G. M. Meyer, in collaboration with Dr. Burton-Opitz, has just published the results of a study of the effects of radium on circulation and respiration. Messrs. W. N. Berg and W. H. Welker have just published the results of a study of the effects of radium on general metabolism. Dr. Meyer is now investigating the radio-activity of various organs after the introduction of radium, and the metabolic effects of various coloring matters. Mr. Berg is giving his attention to some chemical phases of digestion and of regeneration. Mr. Welker, in collaboration with Miss Knox, is studying the effects of rare elements on plants and, in collaboration with Mr. Louis Hussakof, the chemical characters of the egg capsules of various ray fishes. He is also determining the chemical composition of the ash of certain desert plants. Mr. F. S. Weingarten, in collaboration with Mr. B. B. Crohn, is studying the metabolic effects of internal hemorrhage. Messrs. Harry Wessler, George Baehr and A. J. Sibbel are studying the metabolic changes

caused by *Staphylococcus pyogenes aureus*. Mr. D. R. Lucas has completed a study of the pressure conditions in the ureter.

At the meetings of the American Association for the Advancement of Science, held in New Orleans during convocation week, Professor Gies was continued as secretary of the section (K) on physiology and experimental medicine. He was recently reelected secretary of the Society for Experimental Biology and Medicine.

Professor Gies has just published in two parts a small laboratory manual in biological chemistry, which is now in use by the first and second year students of medicine. Additional parts will be issued later.

Department of Physiology.—Professor Curtis has continued during the year his studies of the Aristotelian physiology. In March he gave two interesting lectures before the general student body on "The functions of the nervous system as viewed before the discovery of the nerves."

Professor Lee has been actively at work upon a continuation of his study of fatigue, devoting his time during the present year chiefly to the chemical phenomena. He has determined with exactness the physiological action of the various specific substances known to be causative of normal fatigue. Moreover he has extended his investigations to fatigue in certain pathological conditions, and is able to trace the physical depression accompanying them to certain specific intermediate metabolic products which are present in abnormally large quantities in the diseases in question. His results have been presented from time to time before the American Medical Association, the Society for Experimental Biology and Medicine, the New York Academy of Medicine, and the New York Academy of Sciences. In February he lectured on "Fatigue" before the Harvey Society. In March, by invitation, he represented the University at the annual meeting of the Association of American Medical Colleges in Pittsburg and opened the discussion of the question "What medical subjects can be taught efficiently in the literary school?"

Professor Burton-Opitz's important investigations of the viscosity of the blood have been continued, special attention being given to the effects of dextrose, proteids and radium and to the phenomena of viscosity in fever. He has been appointed to review the American literature for the *Hygienisches Centralblatt*. He has announced for the summer session four courses similar to those that were given a year ago.

Dr. Emerson has continued his studies of last year on abdominal pressure and the effects of changes in circulation on the kidneys. He has recently been appointed assistant attending physician at the Seton Hospital. Dr. Shearer has been appointed assistant attending physician at the Lincoln Hospital. Dr. N. W. Greene, a former officer of the department, has returned to the laboratories this year as an investigator and has just completed a valuable study of artificial respiration with special reference to human beings. Dr. I. Adler has been investigating the physiological action of nicotine.

The University has received a valuable and useful gift for the use of the department of physiology of two microscopes and accessories complete, including high power objectives; and of two cases of slides of microscopic specimens from David L. Haight, M.D., a graduate in medicine of Columbia University in the class of 1864.

FACULTIES OF APPLIED AND PURE SCIENCE

Department of Astronomy.—During the year the Trustees have made a final reorganization of this department, rendered necessary by the permanent illness of Professor Rees. Beginning with next July, Dr. Jacoby will be Rutherford Professor and head of the department, Dr. Poor will continue as a professor in the department, and Dr. S. Alfred Mitchell will be promoted to an instructorship.

Arrangements have also been made to provide a working observatory suitable for undergraduate instruction, and for elementary graduate work in practical astronomy. It has been evident for years that our course in descriptive astronomy would be rendered more attractive to persons seeking general culture rather than a working knowledge of the science if we could supplement our lectures and text-book work with frequent opportunities to view the heavenly bodies themselves through an actual telescope. This has now been rendered possible, through the generosity of several friends of the University, and it is expected that a small but satisfactory observatory will be in operation by next autumn. Classes visiting the observatory will be in charge of Professor Jacoby.

The printing of No. 9 of the "Contributions from the Observatory of Columbia University" now includes one hundred and seventy-five quarto pages, and the volume will probably be distributed this year. Another research, just completed and ready for the printer, is the doctoral dissertation of Miss Anne S. Young. This is a complete discus-

sion of photographs of the two stellar clusters in the constellation Perseus. Professor Poor has continued his investigations of the figure of the sun as far as is possible with the material at present available; a special series of photographs to be made with the largest existing telescope will be arranged for, if possible, in order that this question may be studied further. Dr. Mitchell has partially completed the measurement of his spectrum photographs taken at the recent Spanish eclipse. These photographs probably constitute the best series so far made and show a greater extent of spectrum than has hitherto been obtained. He hopes to determine from the measurements of these spectra the depths of the various gases in the outermost parts of the solar chromosphere and so-called reversing layer. He also hopes to throw some light on the constitution of the corona.

Dr. Mitchell has also been very active in outside lecture work; during the year he addressed the Engineers' Club and the New York Academy of Sciences, and delivered a number of lectures for the New York Board of Education, as well as in Arlington, N. J., and in Jersey City. Professor Poor has lectured at Smith College, and before the New York Yacht Club.

Department of Botany.—The Contributions of the department of botany have completed the ninth volume with the publication of number 225. The volume of twenty-five numbers is made up of reprints from various journals and represents some of the work of members of the staff, and that of students working in the department. The papers of the present series are by L. M. Underwood (9, including a paper jointly with F. E. Lloyd), R. M. Harper (5), F. E. Lloyd (4, including one jointly with L. M. Underwood), and one each by W. A. Cannon, Ada Watterson, W. E. Kellicott, E. P. Bicknell, J. E. Kirkwood, H. D. House, Marion E. Latham, and H. A. Gleason.

The thesis of Professor E. S. Burgess has recently appeared, forming volume 13 of the *Memoirs of the Torrey Botanical Club*. The work is an exhaustive historical monograph of the American species of *Aster* of the Section *Biotia*, and forms a volume of 419 pages with thirteen plates and a long series of text figures illustrating all the eighty-four species.

Dr. Carlton C. Curtis has been advanced to the grade of instructor. He is engaged in the preparation of a text-book in botany which will reflect the methods of instruction that have been most successful during the nine years in which the department has had an undergraduate

laboratory. Dr. Curtis has been a most untiring worker and his efforts have placed the undergraduate department on a high plane of efficiency.

Mr. Ira D. Cardiff has made some very important cytological studies bearing on the problem of synopsis and reduction. His preparations from a wide range of subjects, including both monocotyledons and dicotyledons as well as Ginkgo and Botrychium, show a high degree of refinement in the manipulation of the vegetable cell, and not only add extensive confirmation of results merely hinted at by previous workers, but also show the great adaptability of the plant-cell to yield important results in cytological work. Mr. Cardiff's work will appear in the May and June numbers of the *Bulletin of the Torrey Botanical Club*.

Mr. Harlan H. York, fellow in botany, has been making a study of the Malvaceæ preparatory to a monograph of the group. During the last few weeks of the year he has been in Washington working on the material in the National Museum. Mr. York will also act as an assistant at Cold Spring Harbor during the session of the summer school.

The number of graduate students in botany is larger than ever before and this year will show the maximum number of candidates (four) from the department for the doctor's degree.

Progress on the North American Flora, published by the New York Botanical Garden under the direction of Professors Underwood and Britton, is marked by the commencement of two of the parts on the fungi now in press. The management has been very successful in bringing into the enterprise a large number of special students who will contribute various portions of the text in their respective specialties. Work is already in progress on four volumes of the fungi, one of the algæ, two of the bryophytes, one on the ferns, in addition to several among the higher (seed) plants. A flora of all North America from Alaska and Greenland to Panama in thirty royal octavo volumes is naturally a work which must involve the labor of many specialists. While the Garden has a definite fund for publication which insures the issue of this work, the subscriptions received since the issue of the two initial parts of volume 22 are already nearly sufficient to pay the cost of publication independent of other funds.

Department of Chemistry.—The work in the new laboratory of electrochemistry has been very satisfactory, considering the fact that there was some delay in connection with the new installation. Work in practical electrochemistry has been carried on by a large number of students during the second term, and the facilities provided have met with general approval.

Research work has been conducted by Professor Tucker and Mr. Lampen particularly with reference to the temperatures of certain important reactions taking place in resistance furnaces. This work comprises the study of the temperatures of a carborundum furnace, and the melting points of certain refractory materials used in electric furnace construction. Mr. A. Beltzer is engaged in an investigation of the production of metallic calcium by electrolysis, Mr. A. Kaufmann is investigating the deposition of metallic coatings on copper conducting wires, Mr. Lampen the electrolysis of fused salts, and Professor Tucker new forms of arc furnaces.

A meeting of the New York Section of the American Electrochemical Society was held in Hevemeyer Hall on the evening of March 22, after which the new laboratory was inspected by the members. Demonstrations of the more important pieces of apparatus were given.

Department of Civil Engineering.—During the current year Mr. Charles E. Morrison, C.E., A.M., has served as assistant in civil engineering, but with this exception there has been no change in the personnel of the teaching force of the department.

A material improvement in the course of instruction in C.E.5 has been made through the endeavor to give it greater directness and to render it practicable for students to attain the required efficiency without the necessity of taking a mid-year and a final examination. This has been accomplished by requiring evidence of greater facility in the application of the knowledge acquired, the evidence being secured by means of fortnightly examinations. Students who receive an average mark of at least 8.0 in these tests are excused from the examination at the close of the session. The results have been eminently satisfactory and it is believed that an extension of this feature to other courses may be made with advantage. This does not in any way encroach upon the practical problem and design work, to which the afternoon hours are devoted, but adds efficiency to it.

In sanitary science the third year students are required to supplement their theoretical knowledge by visits to representative plants in actual operation. These trips are usually taken during the Christmas holidays, when the students have the time to make a more careful and thorough investigation of the methods employed at the places visited, and they embrace the New England territory as well as the more local districts. As a proof of work done a paper is required of each student setting forth the conditions and characteristics of the plant which it has been his business to investigate. The papers are read in the pres-

ence of the class and have the advantage of not only fixing in the individual's mind the features of the plant of which he has been the particular investigator, but also of presenting these features to the other students from the undergraduate standpoint. The subjects include water filtration, sewage disposal, sewage farming, in fact, all branches of sanitary science. Besides, the students of this subject during the past year have had the opportunity of listening to lectures by Mr. Whipple and Mr. Hazen. The former gave a talk on "Color determination of water," while the latter lectured on "Mechanical filters."

The subject of hydraulics has been materially strengthened by devoting one afternoon each week to problem work in the drafting-room under the direct supervision of the instructor. In this way as many as eighty problems have been solved during a term and the application of the theory demonstrated.

Owing to the fact that the mining department is now occupying its own building, the civil engineering department has taken over the rooms thereby made vacant and is using the space for offices and for library and museum purposes. As soon as the necessary appropriation can be secured, the room formerly used by the mining department as a library will be made to satisfy similar needs for the department of civil engineering, and the old mining museum is to perform a similar function for civil engineering. At present the department museum is sadly in need of equipment, but it is hoped that this lack may soon be overcome through the aid of our graduates.

Department of Electrical Engineering.—Professor F. B. Crocker has been appointed one of the two delegates from the American Institute of Electrical Engineers on the national advisory board on fuels and structural materials. He is also one of the delegates to the conference on the international standardization of electrical apparatus to be held in London this coming June.

The seventh edition of volume I of Professor Crocker's "Electric lighting" was published recently.

The following investigations are at present under way: "Compounding of rectified alternating current circuits"; "A comparison of several methods of field weakening motor speed control"; "Metallic carbon filaments"; "The self-starting single phase induction motor"; "A comparison of various methods for testing induction motors"; "Test of the single phase railway at Glen Cove, L. I."; "Test of the incinerating plant at the Williamsburg Bridge"; and "A comparison of engine driven and motor driven manufacturing establishments."

Department of Geology.—The summer of 1905 was passed by Professor Kemp chiefly in the service of the U. S. Geological Survey under Dr. David T. Day, whose headquarters were on the grounds of the Lewis and Clark Exposition, Portland, Ore. An experimental concentrating plant was built, in which to treat with the best forms of ore-dressing machinery the black sands obtained by the placer miners of the western country. The chief objects were to develop methods for the more economical saving of gold and amalgam; the discovery of platinum, iridosmine and of other rare minerals, such as monazite; and the utilization of the black sand for iron ore. Professor Kemp was assigned to southern Oregon and northern California and collected many sacks of the sands from the regions known to have platinum. Much of this came from the sea-beaches in northern California and southwestern Oregon. A trip was made for one hundred and fifty miles along this bold and sparsely inhabited coast. Subsequently other sands were gathered in Colorado and in the Black Hills, S. D. These and many other samples have yielded results of great interest and of both practical and scientific value. From time to time reports of progress are issued by Dr. Day through the Survey.

Professor Kemp is one of the associate editors and founders of the magazine *Economic Geology*, issued eight times yearly by several geologists interested in applied geology. Professor John D. Irving, '96 C., Ph.D. '99, now of Lehigh University, is the editor-in-chief, and Professor Heinrich Ries, '92 S., Ph.D. '95, now of Cornell University, is one of the six associate editors. The magazine has thus far issued four numbers and has met with a gratifying reception. The interest in the subjects treated is very great among the mining fraternity.

Professor Kemp has been, since January 1, one of the six or eight special contributors to the "Mining and Scientific Press" of San Francisco, the principal mining paper on the Pacific Coast.

The last week in April and the first in May, Professor Kemp delivered a course of ten lectures in the department of geology, Johns Hopkins University, upon "Ore deposits." In July he is to be a member of an international committee of Canadians and Americans to establish the correlation of the ancient crystalline rocks in northern New York and the neighboring parts of Canada. In the committee he represents the work of the U. S. Geological Survey in northern New York.

Professor Grabau passed a portion of the summer in the service of the Michigan Geological Survey, and subsequently visited the Mississippi valley on a collecting trip in the interests of our instruction in

paleontology. The work in paleontology has grown considerably in late years and the increasing size of the classes has taxed the resources of the department to the utmost. As now presented this branch is proving one of the most attractive in geology.

Professor Grabau in conjunction with Dr. H. W. Shimer, Ph.D. 1904, now instructor in the Massachusetts Institute of Technology, is issuing in the *School of Mines Quarterly* a text-book on "Index fossils," that is, those commoner fossils which determine the age of strata. It will prove of great service in the instruction both at Columbia and elsewhere. In March, Professor Grabau gave three lectures by invitation, one at the Massachusetts Institute of Technology, one before the Boston Society of Natural History, and one before the students in the department of geology at Harvard University. Plans have been made for extended field-work to be conducted during the coming summer.

Dr. Charles P. Berkey has been employed by the New York State Survey the past summer and fall in mapping the Tarrytown quadrangle, which adjoins the Harlem sheet on the north. Some very difficult geological structure has been worked out, which will prove of interest when fully described. Dr. Berkey expects to complete this field and to undertake additional areas next summer.

Dr. A. A. Julien has discovered new features in the local glaciation of New York City which have excited much interest among the members of the New York Academy of Sciences. The movement of the continental glacier turned from southeast to south as it passed from New Jersey across the Hudson. The glacial scratches are, through some obscure cause, all higher on their western than on their eastern sides.

Mr. C. E. Gordon, fellow in geology, has been appointed instructor in geology and zoology in the Massachusetts Agricultural College and will begin work next September. Mr. Gordon succeeds Dr. R. S. Lull, Ph.D. 1903, who goes to Yale University. Three candidates for the doctorate will finish their work this spring.

Department of Mathematics.—At the meeting of the American Mathematical Society held at Columbia University February 24, 1906, Professor C. J. Keyser read a paper "On the linear complex of circle ranges in a plane," and Dr. W. H. Bussey read a paper "On the tactical problem of Steiner."

Dr. Edward Kasner has been elected a vice-president of the American Association for the Advancement of Science and will act as chair-

man of the section for mathematics and astronomy during the year 1906-07. Professor Keyser has been elected a member of the Circolo Matematico di Palermo.

During the coming summer Dr. G. H. Ling will give two courses at the summer session of the University of California in exchange for courses to be given at the summer session of Columbia by Professor M. W. Haskell.

During the academic year 1906-07 the department of mathematics will give forty-one hours a week of graduate courses. Several courses will be given late in the afternoon for the benefit of students engaged in teaching during the early part of the day.

Department of Mechanical Engineering.—Four student investigations of an experimental nature are at present being conducted in the **mechanical laboratories**, comprising the following subjects; 1. The comparison between the calculated governor effects and the actual effects observed on the motion of governor stem with speed and the effects of loading, friction and windage upon this stem-motion.—2. The value of alcohol as fuel in exploding gas engines, compared with gasoline and kerosene. This work includes the most efficient compression both in hot-bulb engines and cold-cylinder engines for pure alcohol and mixtures of alcohol and water. A special request for the results has been made by the Department of Agriculture, which is desirous of distributing the information, in the form of bulletins, to farmers, inasmuch as the passage of the free alcohol bill is being so vigorously advocated during the present session of Congress.—3. The effect of various percentages of hydrogen in gas and air mixtures on the self-ignition compression pressure in exploding gas-engines. This investigation was suggested by the fact that in practical work with producer-gas the engines frequently pre-ignite when the hydrogen exceeds about 16 per cent. in the gas. However, this percentage varies with different engines and different gases, and there are no exact data on the subject.—4. The value of the Venturi meter for measuring quantities of air, gas and steam, both saturated and superheated. This investigation was instigated by the fact that there is at present no large meter for air, gas or steam of sufficient reliability or cheapness to warrant universal employment. The Venturi, in form, is the most simple possible device and is likewise the cheapest. It is hoped by this investigation to show whether or not such a meter can be adapted to the use of fluids other than water.

The rather elaborate investigation begun last year on the pump and train line losses in steam air brake systems has recently been finished by Mr. W. G. Ransom, a graduate student in this department. The work was conducted partly in the University laboratories, partly on the B. & O. and Pennsylvania R. R. trains and partly in the Westinghouse shops. The results are extremely gratifying in their completeness and accuracy. The investigations of Dr. Lucke during the past year have continued along the line of power by gas, and have been extended to include the relation between thermal economy in power-plants and the cost of power. The results of the work will probably be published in book form.

During the past winter, the students of the fourth year class and several of the third year class in mechanical engineering have assisted in two large outside tests on power-plants. One was the acceptance test of the Interborough Power Station in West 59th Street, the engines for which were built by the Allis-Chalmers Company; the other test was on the power-plant of the Lackawanna Steel Company at Buffalo, which is the largest gas-engine power-plant in the world, having been built by the De la Vergne Machine Company.

Several investigations upon the physical properties of construction materials have been conducted in the **testing laboratory** during the winter. The results of one of these investigations upon the subject of sand-lime brick were embodied in a paper and presented by Professor Woolson before the National Association of Sand-Lime Brick Manufacturers at Detroit in December.

Student thesis research work is in progress upon "The physical properties of common building brick," and "The heat resistance of concrete." The latter is being conducted in cooperation with a committee of engineering societies and the U. S. Geological Survey, and is a continuation of similar thesis work done last year.

Professor Woolson has been appointed chairman of the committee on standardization of fire-tests by the American Society for Testing Materials. He is also a member of the committees on standardization of metal tests and of brick tests of the same association.

The department has recently acquired two valuable mechanical models from Brown & Sharpe of Providence, R. I. One is a loan of a set of complicated gears lately exhibited at the Liege Exposition in Belgium, while the other is a gift of a large odontograph engine for laying out the curves of gear-teeth.

Through the courtesy of the Trustees a substantial grant of money for the purchase of new machines for the testing laboratory has become available. It is planned to install these during the summer. These additions were sorely needed and will greatly increase the capacity and efficiency of the laboratory.

Department of Metallurgy.—The most important work of the year has been done in connection with the removal into the new School of Mines building and the installation of the greatly increased amount of apparatus. Most of the apparatus consists of a duplication of the previous equipment, but in addition there are two furnaces designed by Professor Howe for maintaining a very uniform temperature over a large area in different parts of a muffle, for heating steel and other metals. Recent experiments with this furnace indicate that the temperature obtained is practically as uniform throughout the desired field as it can be measured.

Both Lafayette College and Harvard University have conferred the degree of LL.D. on Professor Howe, who has also been made a foreign member of the *Société d'Encouragement pour l'Industrie Nationale* and of the Royal Swedish Academy of Sciences. He is to represent the West of Scotland Iron and Steel Institute at the Franklin Bi-Centennial of the American Philosophical Society, and has been appointed editor of the department of mining for the tenth edition of the *Encyclopedia Britannica*. Durham University has conferred the degree of D.Sc. upon Dr. Campbell.

Mr. E. F. Kern (Ph.D. 1901) has succeeded Dr. M. N. Bolles as tutor in metallurgy. Dr. Kern has had some years' experience in electrometallurgy and in copper smelting. He will have charge of the lecture courses in copper and electrometallurgy, and of certain laboratory work.

In the iron and steel course an address was delivered by Mr. H. H. Campbell, the famous metallurgist and author, and the lectures on zinc were given by Mr. A. L. Queneau (A.M. 1901), consulting metallurgist, formerly with the New Jersey Zinc Co., and the author of a forthcoming volume on "Fuels and refractory materials."

Owing to the growing importance of metallographic research both at the metallurgical works and by engineers, the department has founded a metallographic laboratory under the charge of Dr. Campbell. In addition to the customary work on metals, which has been extended, the students in metallurgy are also obliged to examine under the microscope mattes, speisses, etc., by which study much interesting

and useful knowledge of a practical and scientific character has been acquired. The metallographic course for the mining engineers has been extended so as to include a larger amount of work on alloys and also on structural iron and steel, on tool steel, and in the detection of faults in iron and steel. In addition to these two regular courses an optional course, consisting of ten lectures and three or more afternoons of laboratory work, is now offered, and is so planned as to serve especially the needs of the students in the several departments of applied science, by varying the materials investigated. For example, the mining engineers would study chiefly the opaque constituents of ore bodies and their relations; the civil engineers would confine themselves chiefly to the different classes of railroad and structural iron and steel, including the contrast of good and bad material; the electrical engineers would study also the rationale of the effect of various impurities upon copper, and especially upon the electrical resistance of copper; the mechanical engineers would study the heat treatment of steel and the structure of high speed and self-hardening tool steel. In this way it is hoped to cover the ground thoroughly, since by means of work of this nature a great deal of instruction may be acquired in a brief time in the laboratory, following instruction in the theory of the subject.—The lecture courses on the metallurgy of gold, silver, zinc and the minor metals have been increased from two to three hours per week, the change taking effect during the autumn of 1905.

The summer school of non-ferrous metallurgy comprised two parties, one of twenty and the other of twenty-eight, both under the direction of Dr. Campbell. Each party devoted six days to visits to various metallurgical works in the neighborhood of New York. Notes were taken and records made of the smelting and refining of copper, lead, zinc, gold and silver, and the manufacture of crucibles. The iron and steel summer school spent six days visiting the works near Pittsburgh, with the exception of certain students in metallurgy, who spent several weeks at work in some of the large American steel works. During the Easter vacation of 1906, the iron and steel class, under the direction of Professor Stoughton, took a two days' metallurgical trip in the vicinity of New York to a blast furnace, to Bessemer, open hearth and crucible steel works, hammering and rolling mills, a steel foundry, and malleable cast iron and grey cast iron foundries.

Professor Howe has investigated with Professor Stoughton the mode of flow of pearlite and ferrite in wire-drawing, the corrosion of wrought iron and steel, and the piping and segregation in ingots of

steel and wax. Professor Stoughton has conducted an investigation on high-speed tool steels, and is erecting in Pittsburgh a plant for the manufacture of steel castings, using a special Bessemer converter designed by him and similar to one erected by him in Newark in 1901. Dr. Campbell has conducted investigations on the heat treatment of some high carbon steels and (with C. W. Knight) on the microstructure of silver ores from Cobalt, Canada. With Messrs. Knight, Simpson, Kellogg and others he is conducting a microscopic examination of the opaque constituents of ore bodies; with C. W. Knight an investigation into the recovery of silver and arsenic from argentiferous cobalt-nickel; with F. H. Duden the remedy for the injurious effect of copper in the cyanide process as applied to gold ores; with T. S. Kong the determination of the constitution of mixtures of lead and lead sulphide. Dr. Kern (with H. S. Auerbach) is working on a method for the electrolytic treatment of lead concentrates, and with Professor Howe and R. C. Blanchard is carrying on a research on an alloy of copper and silver, containing about four per cent. silver. He is studying the segregation in the alloy as influenced by the size of the ingot, the rapidity of cooling, and the effect of long exposure to specific temperatures.

Mr. Waterhouse is continuing his work for the doctorate and is investigating under Professor Stoughton the influence of nickel and carbon on iron, the overheating, burning and restoring of nickel steel and the cementation of nickel steel. At the Lackawanna Steel Co., in Buffalo, N. Y., he has completed an investigation on the influence of copper on the color carbon estimation. Messrs. E. Hess and E. M. Shipp are investigating, under Professor Stoughton, the heat treatment of steel of 0.50 per cent. carbon. All graduate and undergraduate researches are carried out under the immediate direction of Professor Howe, who plans most of the investigations and supervises the others.

In the extension department Professor Stoughton has given six lectures on "The metallurgy of iron and steel." The course has been given at St. Bartholomew's Lyceum Hall and at Cooper Institute. Three of the lectures are to be repeated at the Board of Education Hall. Professor Stoughton has also given a lecture on "Foundry mixtures" before the Newark Foundrymen's Association, and an informal address on the foundry to the Associated Foundry Foremen. Dr. Campbell recently delivered a lecture on "The structure of iron and steel" before the Franklin Institute.

Department of Mineralogy.—During the past year there have been added to the Museum 217 specimens, of which ten were

new species. Among those of special interest may be mentioned cut and polished sections of gem-tourmaline from California, and a pear-shaped mass of ruby, produced by fusing together ("nursing") small artificial ruby crystals.

A special gift of money has made it possible to add to the apparatus two new Seibert microscopes, two new Fuess one-circle goniometers, one new Fuess simple refractometer and one set of Schroeder van der Kolk liquids for determination of indices of refraction. Mr. H. Lieber has presented a radium coated celluloid rod.

Among gifts of minerals may be mentioned the gold-bearing arsenopyrite from Doloro, Ontario, hanksite crystals from Mr. Kuntz, copper specimens from the Copper Queen Company, crystals of the so-called luzonite, which on investigation were proved by Professor Moses to be identical with enargite, and spodumene from the Etta Mine. By exchange a very interesting suite of cobalt, nickel and silver minerals has been obtained from Lake Temiskaming. A small collection of synthetic minerals has been started, which it is hoped to develop further.

For the first time summer courses in mineralogy will be offered this year as follows: s1—General mineralogy; lectures and museum work, to count 2 points. s2—The determination of minerals and crystals, principally laboratory work, to count 2 points. Both courses are to be given by Professor Moses.

Course 8 (physical crystallography) will be discontinued, in order that the chemists may have time for work in electro-chemistry, but the old course 8 will probably be combined with the present course 1-2 (given during the first year), thereby establishing a new course, 7-8, especially designed for chemists. Course 15 for chemical engineers was given for the first time this year.

Professor Moses has published in the *American Journal of Science* an article on the crystallization of luzonite, proving its identity with enargite; also crystallographic studies on wolframite from Boulder, Colorado, sylvanite from Cripple Creek, and hematite, showing parting, from Franklin Furnace; he is at present preparing an article on the methods and formulæ involved in one circle goniometrical measurements and reductions.

Professor Luquer has issued a new edition (largely rewritten) of his text-book, "Minerals in rock sections." Mr. Lamme is specializing in chemical mineralogy, and several important analyses are about to be published.

The equipment of the small department laboratory has been improved and it is hoped to increase its efficiency still further in the near future.

Mr. Read has published in the Transactions of the American Institute of Mining Engineers an article on "The secondary enrichment of copper-iron sulphides." Both Mr. Lamme and Mr. Read are completing their theses for the degree of doctor of philosophy.

Professor Rogers, who left the department last year for Leland Stanford, Jr., University, has finished his work on the optical properties of crushed fragments of minerals, and will publish the results of his investigation in the April issue of the *School of Mines Quarterly*.

Department of Mines.—Professor Munroe was absent on leave for about one month in March and April, engaged in professional work in Southern California.

During the current year the ore-dressing laboratory equipment, which formerly occupied a part of the basement floors of the engineering building, has been in process of reerection in the new School of Mines building. In the work of installing the machinery the department has been somewhat hampered by lack of sufficient funds, but in February the large class of fourth year students began its laboratory practice in sampling, hand-sorting, crushing and sizing of ores, and in small-scale tests with laboratory classifiers, jigs and slime-tables. Most of the full-size concentrating machinery was completed and in operation by the end of March. In carrying on the ore-dressing work the students are divided into sections (this year there were four sections of twelve or thirteen men), each being occupied in the laboratory during the afternoons of three weeks. The ore-dressing laboratories occupy all of the two basement floors of the building with the exception of one room in the sub-basement. The rooms are much lighter than those formerly occupied in the engineering building on account of the difference in street grade, a portion of some windows being above the level of the sidewalk. The upper basement is entirely above ground.

During the year, in the course of his work leading to the degree of Ph.D., Mr. Thomas T. Read, E.M., has been studying the nature of gold amalgam, together with the effects of temperature and other conditions on the process of amalgamation as applied to the milling of gold ores.

Department of Physics.—The most important new feature this year in the department of physics were the two courses of lectures on theoretical physics given by distinguished foreign scientists. In December and January Professor V. Bjerknes, of the University of Stockholm, gave eight lectures on the subject of fields of force. In the first lectures the remarkable similarity between the properties of certain hydrodynamic fields of force when compared to electric and magnetic fields was illustrated by a series of experiments with ingenious apparatus which Professor Bjerknes brought with him. These experiments were received with so much interest that they were repeated before a large audience at the January meeting of the American Physical Society. In the other lectures Professor Bjerknes developed in a remarkably well ordered and direct manner the equations of electric and magnetic fields on one hand and of hydrodynamic fields on the other. The final lecture was concerned with the application of the principles of hydrodynamics to the problems of meteorology.

In March and April Professor H. A. Lorentz, of the University of Leiden, gave ten lectures on the theory of electrons and its application to many phenomena of physics, especially those of radiation. There is at present perhaps no subject in physics of greater interest and possibilities than this, and no one is better qualified to discuss it than Professor Lorentz. Expressing himself in English with the ease and exactness we should expect only from one who has spoken the language for years, Professor Lorentz set forth the general theory of the electron and the results obtained from its application, with the greatest simplicity and directness. Printed notes on the lectures, containing the mathematical formulæ, were distributed before the various lectures. Both courses of lectures will be published.

Mr. Julian Blanchard, A.B., Trinity, N. C., has been appointed lecturer in physics, succeeding Mr. R. F. Deimel, who resigned at the close of the first term in order to accept a position in the department of mathematics in the College of the City of New York.

Department of Zoology.—The latest additions to the Columbia Biological Series, edited by Professors Osborn and Wilson, form an interesting group of three volumes dealing with a series of related problems that belong to the newest phases of biological investigation. This group includes Professor Loeb's work on "The dynamics of living matter," published in April; Professor Jennings's book on "The behavior of the lower organisms," now in type and almost ready for publication; and Professor Wheeler's work on "The structure and

habits of ants," which it is hoped will appear in the autumn. It is significant of the character of the new movement in zoology that all of these volumes, each written by a master in his special field, are primarily devoted to the analytical study of animal activities, and are largely the outcome of experimental research. Professor Loeb's work deals with the problems of general physiology, and is frankly offered as an attempt to formulate the vital activities in general in physico-chemical terms. The broad field that it covers, and the unity of its aims, may be judged from the fact that it offers a treatment of subjects as widely separate as protoplasmic structure, muscular contractility, fertilization of the egg, development, regeneration, and animal behavior, essentially from a single point of view. In the chapter on tropisms and related phenomena, Professor Loeb's analysis comes directly into contact with the central problem that forms the subject of Professor Jennings's book. The wide contrast between the conclusions of the two authors will bring to the attention of general readers a current scientific controversy that is as important to the psychologist as to the zoologist, dealing as it does with the beginning of instinctive and intelligent activities. Professor Wheeler's volume will extend this discussion into a still wider field which overlaps that of comparative sociology as well as of psychology. It includes a critical account of exact modern studies, to which the author has himself made such important contributions, on the evolution of the complex instincts and social organization of the insects. The lectures that form the basis of this volume were given at Columbia last year. Those by Professor Jennings were given during the present year and formed the eleventh annual series of Columbia Biological Lectures. It is hoped that arrangements may be made for a succeeding course on heredity, to be published as an additional volume. The Biological Series may now fairly be said to have established itself as a representative of the most modern and advanced work in zoology and general biology. It is the purpose of the editors to maintain this policy in the future, limiting the series to no special field, but endeavoring to give authoritative general presentation of the varying phases of biological progress.

The special investigations carried on by students and other members of the department have been more numerous and varied in character than in any previous year. Researches by graduate students have included the following: Studies on the embryology of aquatic salamanders, by Mr. Goodale (fellow); on the embryology of the myxinoid fishes, by Mr. Stockard (nearly completed for a doctor's dissertation);

on the cytology and development of nemertines and ctenophores, by Dr. Yatsu (working during part of the year at the Naples Zoological Station); on the Arthrodira—the great armored fishes of the Devonian—by Mr. Hussakof (memoir completed for publication as a doctor's dissertation); on the development of the fins in archaic sharks, by Mr. Osburn (completed for a doctor's dissertation); on the Spirochaete parasite of relapsing fever, by Dr. Terry; on the supposed organism of hydrophobia, by Dr. Zinsser; on the musculature of the horse with reference to the evolution of horses, by Mr. Mead; on the genital ducts and nephridia of annelids, by Miss Gregory; on the spermatogenesis of spiders, by Miss Berry; on the life-cycle of Hydra, by Mr. Whitney; breeding experiments for the study of Mendelian inheritance in mice, by Mr. Horton; on the embryology of sponges, by Mr. Henriksen; on the life-cycle and asexual reproduction of Stenostoma, by Mr. Eddy; on the cytology of conjugation in Protozoa, by Miss Cull (in collaboration with Professor Calkins); on regeneration in the frog, and on the influence of lecithin on the growth of young kittens, by Mr. Goldfarb; on the influence of osmotic pressure and the action of salt solutions on Fundulus, by Mr. Brown; on the cytological changes accompanying starvation and feeding in salamanders, by Mr. Morgulis. In addition to the foregoing, several papers have been published by graduate students, including Messrs. Stockard, Yatsu, Goldfarb, Whitney, Hussakof and Terry. The foregoing researches have extended over a remarkably wide range of subjects, and many of them have yielded valuable new results for publication.

Among the special researches by other members of the department may be mentioned the following: Miss Read has continued her investigations on the life history of *Nematus*, and Miss Dederer has undertaken a study of the spermatogenesis of *Lepidoptera*. Dr. McGregor has completed a memoir on the *Phytosauria* that has yielded important results on the affinities of the group, and he is now engaged on a memoir on the Permian genus *Stereosternum*, undertaken for the Geological Survey of Brazil. Dr. Kellicott is engaged on a study of correlation in the internal and external organs of the toad, and Professor Crampton has continued his elaborate statistical investigations on correlation, variation and heredity in *Lepidoptera*. Mr. Gregory has completed an extensive paper on the orders of *Teleostomes* that has been accepted for publication by the New York Academy of Science. Professor Morgan has carried on investigations on the life-history of the aphids with reference to sex-production and

the alternation of generations, on sex-production in the male and female eggs in Phylloxera, on the effects of external agents on the development of the frog, and on the physiology of regeneration. In a paper on the last-named subject, now ready for publication, he has given a general analysis of this complex and difficult problem. Professor Calkins has been engaged (with the collaboration of Miss Cull) on an extended study of the cytology of conjugation, rejuvenescence and regeneration in Protozoa. Professor Dean has nearly completed the revision of the proofs of his extended memoir on the embryology of Chimaera, to be published by the Carnegie Institution. Professor Wilson has brought to a completion his first series of studies on the cytological basis of sex-production and Mendelian inheritance in the insects, and read a paper on this subject before the November meeting of the National Academy of Sciences. Professor Osborn has nearly completed his large monograph on the Titanotheres for the United States Geological Survey and has progressed with a second monograph, also for the Survey, on the Sauropoda.

More general work in progress includes Professor Osborn's volume on "The evolution of the horse," No. 1 of the Jesup Lectures at the American Museum, which is now in preparation and will be published by the Columbia University Press. He has recently been elected a foreign member of the Linnean Society of London. Professor Calkins has in preparation a new book on the parasitic Protozoa which have now assumed so great an importance for the study of contagious disease. This work will be the first general treatise on the subject. Professor Osborn's and Dr. McGregor's text-book on the classification of the vertebrates is now well advanced towards completion and it is hoped that it may be published during the coming year. Professor Wilson is engaged on a revision of his book on the Cell for a third edition, and has projected a briefer and more general work on the same subject.

During the first half year Professor Dean was absent on leave, passing five months on the coast of Japan engaged in the collection of additional material for the prosecution of his studies on the embryology and evolution of the primitive vertebrates. He also visited a number of zoological museums in Japan, Singapore and India, and arranged exchanges that will notably enrich the teaching collections of the department. During a part of the second half year Professor Crampton has been absent on an exploring trip to the south Pacific (Tahiti) in order to obtain material for the study of the terrestrial

mollusks of that region, which are of special interest in relation to the questions of mutation, variation and inverse symmetry. It is hoped that other material of special zoological interest may be obtained. For the coming summer Professor Wilson is planning an extensive trip in the southern and southwestern states especially for the collection of material for the cytological study of problems connected with sex-production and inheritance, a subject to which a large amount of attention is being given in the department at present. The results already attained have thrown new light on these problems and it is hoped that a more complete analysis may be effected by a broader study. Other field work will be carried on at the marine laboratories at Wood's Hole by Professor Morgan and his pupils, at Coldspring Harbor by Professor Crampton and others, and at the Harpswell laboratory on Casco Bay.

FACULTY OF POLITICAL SCIENCE

General.—The *Political Science Quarterly* completed, with the appearance of the December number, 1905, the twentieth year of its existence. In a retrospect printed in the December issue, 1895, the managing-editor divided the two hundred and sixty-six leading articles published during the *Quarterly's* first decade into three groups. A similar analysis of the two hundred and sixty-one leading articles published from 1896 to 1905, inclusive, shows the following changes:

	1886-1895	1896-1905
Economics, finance and sociology....	42 per cent.	45 per cent.
History and political theory.....	25 " "	26 " "
Public law and jurisprudence.....	33 " "	29 " "

The compilation of the *Quarterly's* semi-annual "Record of political events" has been undertaken by Mr. Paul Haworth, tutor in history in Teachers College.

Department of History.—Professor Shepherd has been elected a member of the Hispanic Society of America. He is at present engaged on the preparation of an English edition of Putzger's *Historischer Schul-Atlas*, and of a report for the Carnegie Institution on the materials in the Spanish archives for the study of American history.

Department of Public Law and Jurisprudence.—Professor Munroe Smith gave twelve lectures on Roman Law in January and February to the fourth-year class of the Georgetown University Law School in Washington. In April and May he delivered eight lectures on "The

development of law and of legal rights" at Amherst College, on the Henry Ward Beecher foundation.

Professor Goodnow is engaged in seeing through the press a new case-book entitled "Cases on administrative law with special reference to the law of officers and extraordinary legal remedies."

Department of Economics and Social Science.—The loss of Professor Johnson, who has resigned to accept the chair of political economy and finance at the University of Nebraska, is keenly felt by his colleagues in the department. Professor H. Schumacher of the University of Bonn, who has been selected as the German representative at Columbia for next year in exchange for Professor Burgess, the first incumbent of the Roosevelt professorship, will offer a course of lectures on "Banking and large industrial undertakings in Germany." His seminar will be devoted to a comparative study of the trust movement in Germany and the United States.

On January 12, Professor Seager delivered a lecture on "The new political economy" before the students of Vassar College.

FACULTY OF PHILOSOPHY

Department of English.—Students and instructors both deplore the approaching departure of Professor W. A. Neilson, who has accepted a professorship of English in Harvard University, and will begin his duties there next autumn. His successor is Professor Ashley H. Thorndike, a biographical sketch of whom appeared in the March issue. Columbia is exceedingly fortunate in securing Professor Thorndike and in thus supplying Professor Neilson's place so promptly with a scholar of kindred spirit and equipment.

The course of instruction offered by the department will be further enriched next year by the appointment as lecturer of Dr. John W. Cunliffe of McGill University, who will join the university staff in February, 1907, and will give two graduate courses during the entire second half-year. Dr. Cunliffe was a pupil of Professor A. W. Ward, and was Shakspeare Scholar and Berkeley Fellow in English literature at Owens College, Manchester (now the University of Manchester). In 1884 he received his A.B. from the University of London, and subsequently an A.M. in both classical and modern literature. In 1894 he received the degree of doctor of literature from the same institution, presenting as his thesis "The influence of Seneca upon Elizabethan tragedy," a volume which brought him at once to the attention of English scholars throughout the world, and which met

with their cordial approval. Since 1898, Dr. Cunliffe has been lecturer on the English language and literature at McGill University.

Professor G. R. Carpenter is to be away next year on leave of absence. His graduate course in rhetorical theory and practice will be given by Professor W. T. Brewster of Barnard College.

Miss Katherine Jackson's thesis, "Outlines of the literary history of colonial Pennsylvania," has just been issued, and is valuable as giving a clear account of a phase of our literary development which no general historian of American literature has been able to treat in great detail. Dr. Henrietta A. Moore's somewhat similar dissertation on the interesting literary history of New York City during the early decades of the last century is in the hands of the printers, and will appear in the autumn, together with Mr. Goddard's studies of special phases of New England transcendentalism. Professor Tucker's account of the evolution of satirical poetry in England is also practically ready for printing, and will doubtless appear during the course of the next academic year.

The Men's English Graduate Club has held regular fortnightly meetings throughout the year, in which the members have discussed topics of importance, or have been addressed by officers of the department or persons of distinction from outside of the University. On April 6, Professor F. N. Scott, of the University of Michigan, gave a public lecture in the afternoon on "The prosody of Walt Whitman," and spoke before the Club in the evening.

Fifteen graduate courses in English are offered for 1906-07, of which eight are courses that have not hitherto been offered by the department. Among the latter is Professor Brander Matthews's interesting announcement of a course on "Shakspeare as a playwright."

Department of Germanic Languages and Literatures.—The registration in the department during the past year has been as follows: Columbia College, 298; Barnard College, 203; Teachers College, 91; graduate schools, 117; total, 709. Adding 201 for the summer session and 104 for extension courses, gives a total registration for the year of 1,014. Instruction was offered in 44 courses with an aggregate of 125 hours per week, distributed as follows: In Columbia College 8 courses, 35 hours; in Barnard College 10 courses, 36 hours; in Teachers College 5 courses, 15 hours; under the faculty of philosophy 12 courses, 24 hours, of which 9 courses were open also to undergraduates; in extension teaching 9 courses, 15 hours. Making allowance for identical courses given under two or more faculties, the actual

number of independent courses has been 26. In the summer session 11 courses with an average of 11 hours per day were given.

Owing to the absence on leave of Professor Thomas, the work of the department has been carried on under the stress of additional labor for most of its members. Thus the Seminar was for the whole year under the direction of Professor Carpenter, the History of German Literature was conducted by Professor Tombo, Faust and the Proseminar by Professor Hervey, and Faust in Barnard College by Dr. Braun.

The following changes in the personnel and academic standing of the teaching-staff will take place with the beginning of the new academic year: Mr. Seiberth, a member of the department since 1903, first as assistant in Columbia University, then as lecturer in Barnard College, will sever his connection with the University, and the position of lecturer thus vacated will be filled by Mr. Alexander Otto Bechert. Mr. Bechert was graduated from Columbia College in 1903, and obtained his master's degree the following year. He was University scholar in German in 1903-04, and University fellow 1904-05. During the last year he has held the positions of junior teacher in German at the Curtis High School on Staten Island, and of tutor in German in the College of the City of New York. Dr. Wilhelm Braun, tutor in Barnard College since 1901, will hold the rank of instructor. The new incumbent of the Carl Schurz fellowship is Mr. H. H. L. Schulze, A.B., College of the City of New York, 1903; A.M., Columbia University, 1905.

Dr. Leopold Bahlse, lecturer in Teachers College 1902-03, has become director of the *Realgymnasium* in Stralsund, Germany. Dr. H. W. Thayer, fellow in German 1901-02, preceptor in German in Princeton University, has been appointed instructor in Cornell University for the summer session, 1906. Mr. Palmer Cobb, scholar in 1902-03, and Mr. F. W. Hauhart, fellow in 1903-04, have pursued advanced studies during the year at German universities.

A considerable number of new courses appear in the announcement for 1906. Under the faculty of philosophy the following are offered: "German drama in the 19th century," by Professor Thomas; "Modern German dramatists: Sudermann and Hauptmann," by Professor Tombo; "Middle High German—literary course," to be given in alternate years with a philological course, by Professor Hervey, and "German civilization of the Middle Ages"—made possible through the generosity of the Germanistic Society of America—by Dr. Richard. In Columbia College, Mr. Heuser announces "Selections from 19th

century writers—Kleist, Grillparzer, Hebbel and Ludwig." In Barnard College, a course will be added in "German composition and colloquial practice," by Miss Periam and Mr. Bechert. "Modern German syntax," and "German in secondary schools—study of material," is the new work offered in Teachers College by Professor Bagster-Collins.

Professor Carpenter was one of two representatives of the University at the annual meeting of the Association of American Universities, held in California, March 14-17. His paper read at the meeting, on "The reaction of graduate work on the other work of the University," will be found elsewhere in this issue. Professor Thomas has spent his sabbatical year abroad; from three to six weeks each were passed in Norway, Sweden, Holland, Munich, Vienna, Greece, Italy, Paris, and England, the winter months being largely spent in Berlin. He has in preparation for D. C. Heath and Co. an "Anthology of German literature." Professor Bagster-Collins has conducted an experimental class in German in the Horace Mann elementary school throughout the year. February 13, Professor Hervey lectured before the *Deutscher Verein* on Ludwig Fulda. During the months of November and December, Professor Tombo again repeated his course of lectures on "Great German writers" for the free-lecture system of the New York Board of Education. He lectured on Faust at the University of Missouri, March 20, at Iowa College, March 27, and at the University of Wisconsin, March 28. He also spoke on "Das höhere Unterrichtswesen der Vereinigten Staaten mit besonderer Berücksichtigung der Columbia Universität" before the Germanic Society of Pittsburgh, on March 16, and before the *Gesellig-Wissenschaftlicher Verein* of New York on April 26. He also recently addressed the Colored Branch of the Y. M. C. A. of New York and the University Club of Hudson County (N. J.). As delegate of the Alumni Council, Professor Tombo spent three weeks on a western trip, visiting old alumni associations and organizing new ones. Dr. Remy lectured on December 14 before the *Gesellig-Wissenschaftlicher Verein* on "Omar Khayyam, ein persischer Dichter." Two classes at the New York Opera School have been conducted by him. Miss Periam passed the examination for the doctorate on December 9. Mr. Heuser has in press with Silver, Burdett and Co. Grillparzer's "Die Ahnfrau," edited jointly with Mr. G. H. Danton of Western Reserve University. Mr. Seiberth spoke before the *Deutscher Verein* on "Hebbel, Keller, und Mörike."

The courses in German in the coming summer session will be given by Professors Hervey and Tombo, Dr. Remy, Dr. Braun, and Mr. Heuser. Three new courses are announced: "Proseminar on Lessing" by Professor Hervey, "Lessing's *Laokoon* and *Hamburgische Dramaturgie*" by Dr. Remy, and an additional course on "Lessing, Goethe and Schiller," parallel with one already given, by Professor Hervey and Mr. Heuser. The course on "19th century literature," given last year, will be omitted in 1906.

The extension courses during the winter were conducted by Professor Hervey, Dr. Braun, Mr. Seiberth, and Dr. Richard in New York, and by Professor Hervey, Dr. Remy and Mr. Heuser in Brooklyn. The courses offered next winter will remain the same, except for the omission of the course on "Nineteenth century literature," and the substitution of one on "Faust" for that on "Lessing, Goethe and Schiller," given by Professor Hervey.

Department of Indo-Iranian Languages.—The third volume of the Indo-Iranian Series, "A bibliography of the Sanskrit drama," by Montgomery Schuyler, Jr., appeared early in April, and several additional volumes are in various stages of preparation. Professor Jackson has been engaged in the preparation of a new work, to be published by the Macmillan Co., entitled "Persia past and present," which contains an account of his journey in the East in 1903 and the results of research in Persia.

The public lectures under the auspices of the department were continued this winter. Eight lectures were given, four by Professor Jackson, one by Dr. Yohannan, and three by present or former students of the department, Miss Lucia Grieve, Mr. George C. O. Haas, and Mr. J. H. Moore, and the attendance was most gratifying.

The Indo-Iranian Club held its usual meetings during the year. The members read papers on special subjects or reported on the progress of their investigations in various fields, and the sessions of the club have become a regular and by no means unimportant feature of the work of the department. The members of the department and several of the students attended the meeting of the American Oriental Society held at New Haven in April.

Departments of Philosophy and Psychology.—Several changes have occurred in the personnel of the teaching staff during the year. Professor Fullerton returned from Germany in the fall and offered courses in metaphysics and epistemology for the first half-year. Illness in his

family prevented his continuing the work, and he was granted leave of absence for the second half-year. His courses have been completed by Professor G. A. Tawney, of Beloit College, who began his residence here in February. The appointment of Dr. Jones and Dr. Sheldon as preceptors in Princeton University made two vacancies in philosophy. These were filled by appointing as lecturers Dr. Dickinson S. Miller and Mr. Walter B. Pitkin. Dr. Miller, formerly of Harvard University, had been connected with the department of psychology last year, taking the work of Professor Strong during the latter's absence. He is at present offering courses in ethics, logics and the history of philosophy. Mr. Pitkin is a graduate of the University of Minnesota, and comes to Columbia after five years of graduate work abroad. He is offering the courses at Barnard and at Columbia formerly given by Dr. Jones. Mr. David F. Swenson, instructor in philosophy in the University of Minnesota, has held the position of assistant in philosophy during the current year. A new assistantship in philosophy has been established at Barnard College, and Mr. Roland Haynes, a graduate of Williams College and a master of arts of Clark University, is the first incumbent.

Professor Strong is still abroad, detained there by serious illness in his family. His courses have been taken during the year by Dr. V. A. C. Henmon, who received his degree of Ph.D. here last commencement. Dr. Henmon has been appointed lecturer in psychology for next year, and will inaugurate an undergraduate course in experimental psychology in Barnard College. The assistantships in psychology have been held this year by Mr. Francis M. Hamilton, formerly of Indiana and Chicago Universities, and by Mr. Stevenson Smith, who came here from the University of Pennsylvania. Miss Mary T. Whitley has been assistant in educational psychology in Teachers College. Dr. Kate Gordon, who took her degree at Chicago and has been teaching in Mt. Holyoke College, has been appointed an instructor in educational psychology in Teachers College.

The influence of Columbia on the philosophy and psychology of the country is widening, as shown by the growing number of positions held by men who have taken all or a large part of their graduate work here. Among the changes that have taken place during the current year are the following: Among the new "preceptors" in philosophy at Princeton University, in addition to Dr. Sheldon, whose appointment was recorded in a previous number of the *QUARTERLY*, there are Dr. Jones, who was for several years connected with the department of philosophy

here, as student, assistant and tutor, and Dr. Marvin, formerly assistant here and since professor at Western Reserve University. Dr. James Burt Miner, of Iowa University, has been appointed assistant professor of psychology in the University of Minnesota, where he will direct the work of the psychological laboratory now being equipped, and also have charge of the work in educational psychology. Mr. William Harper Davis has been advanced to the rank of assistant professor of philosophy and psychology in Lehigh University, and placed in charge of the department. Dr. J. Franklin Messenger has been promoted to an assistant professorship in the Virginia State Normal School. Dr. W. I. Chamberlain, who was for some years president of Vellore College in India, is now professor of logic and philosophy in Rutgers College. Of those who were graduate students here last year, Dr. Dearborn is instructor in educational psychology in the University of Wisconsin, Dr. Marsh is instructor in psychology in the Ohio Wesleyan University, and Mr. Fracker has returned to his post as professor of psychology in Coe College.

One of the most interesting features of our work is the opportunity, frequently afforded, of having distinguished students of philosophy or psychology from other universities discuss the subjects with which they have most closely identified themselves. The non-resident lectureship in psychology was this year held by Professor Ostwald of the University of Leipzig, who gave a course of six lectures on the subject of "Energetics," in which he endeavored to show the relation of the doctrine of energy to the problems of life, consciousness, science, art and ethics. The meetings of the Philosophical and Psychological Club give an opportunity, much appreciated alike by instructors and graduate students, of informal discussion with such men of their salient doctrines. At one of the meetings of the club, Professor Ostwald was the guest; at another, Professor Bawden of Vassar College discussed "Pragmatism and objectivity"; while at another Professor Fullerton talked with the members on topics suggested by his recent book.

Among the researches now in progress, or recently completed, is Professor Cattell's study of scientific men, incidental to which is the recent publication of his directory of "American men of science." He is also engaged in the study of practice, and has suggested a means by which the "practice-curve" can be utilized as a method in education. Professor Thorndike recently published the result of his work on twins—a study of the relative importance of heredity and training on the traits of an individual—and is now engaged in a criticism, by empirical

tests, of different methods for estimating "correlation." Professor Woodworth continues his work on the psychology of voluntary movement and on vision, and Dr. Norsworthy her studies of mentally deficient children. Dr. Henmon is still at work on the relations between the time and the intensity of mental processes, and has succeeded in developing a method by which the time of color discrimination can be utilized for the detection of color blindness and of slighter defects in color vision. Other researches recently completed or now in progress in the laboratory include: Studies of the eye movements in reading, by Dr. Dearborn, and of the perceptual factors in reading, by Mr. Hamilton; of linguistic lapses and of the use of statistical methods for the empirical determination of literary standards and values, by Mr. Wells; on the diurnal course of human efficiency, by Dr. Marsh; on the effect of different bodily positions on mental efficiency, by Mr. Jones; on the behavior of protozoa and on the psychology of stuttering and of its cure, by Mr. Smith; and on the effects of the intensity, duration and area of the stimulus upon the reaction time, by Mr. Froeberg.

The scientific activities of the members of these departments have been mirrored, to a large extent, in the program of the three joint meetings of the section of psychology of the New York Academy of Sciences and the local branch of the American Psychological Association, in which the following papers have been presented: "Measurement of scientific merit" and "The practice-curve as an educational method," by Professor Cattell; "Linguistic standards" and "Statistical method and literary values," by Mr. Wells; "A study of the reading pause," by Mr. Hamilton; "Vision and localization during rapid eye movements" and "Color sensations and color names," by Professor Woodworth; "Are mental processes in space?" and "Misconceptions of realism," by Dr. Montague; "The detection of color blindness," by Dr. Henmon; "The four powers of life" and "The distinction between heart and head," by Dr. Miller; "The type in psychophysical data," by Dr. Wissler; "Esthetic value of lower sense-qualities," by Mr. Pitkin; "A comparison of mental states in the horizontal and vertical positions of the body," by Mr. Jones; "On simultaneous color contrast," by Miss Focht.

The *Library of Philosophy, Psychology and Scientific Methods*, of which Professor Cattell is editor, and the similarly-named *Journal*, edited by Professor Woodbridge, have now been supplemented by the inauguration of the *Archives of Philosophy, Psychology and Scientific Methods*, under their joint editorship. Some of the early numbers of

the *Archives*, representing research work carried on here, are by Professors Thorndike and Boas, and by Drs. Bush, Henmon, Dearborn, Arnold, Marsh and Norsworthy.

In the summer session for the current year courses will be offered in philosophy and psychology by Professor Thilly of Princeton University and Professor Kirkpatrick of the Fitchburg Normal School, together with Professor Woodworth and Dr. Montague.

Of the courses in philosophy offered during the current year by the Brooklyn Institute of Arts and Sciences, three have been given by members of the department. Professor Fullerton delivered a course of six lectures in the fall on "The fundamental problems of philosophy." This was followed in February by a series of six lectures on successive Sunday evenings by Professor Dewey on the subject, "Contemporary ethical problems," and in March Professor Woodbridge gave a course of six lectures on "Modern philosophers," in continuation of the course given a year ago. At the Finch School, in this city, Professor Lord has given during the year a course of lectures on "The transmission of race experience through literature." Professor Dewey delivered the address at the annual meeting of the Michigan School Masters' Club, in Ann Arbor, March 31, on the subject of "Self-activity in education: its conditions and obstacles."

Department of Romance Languages.—On March 21 the instructors and graduate students in the department visited the building of the Hispanic Society of America, Broadway and 152d Street, at the invitation of Mr. Archer M. Huntington. The society will soon place its unrivalled collection of books relating to the history, language and literature of Spain at the disposal of students and investigators, and Mr. Huntington has expressed the wish that the instructors and advanced students of Spanish at Columbia regard the building of the Society as their laboratory. It is hoped that in the near future a Spanish seminar, to meet in the Hispanic Society building, may be organized at Columbia.

Dr. C. H. Page, at present lecturer, has been promoted to an adjunct professorship. Dr. R. T. Holbrook has tendered his resignation as tutor, having accepted a position of associate at Bryn Mawr College. Professor B. D. Woodward has been granted leave of absence for the next academic year. Two lecturers have been appointed to serve during his absence, Mr. Dino Bigongiari and Dr. John L. Gerig. The former, a Columbia graduate of the College, is at present an assistant in the Latin department. Dr. Gerig is tutor in Romance languages at

Williams College, and was formerly connected with the University of Nebraska, where he received the doctorate, and with the University of Missouri. From 1903-1905 Dr. Gerig studied at the University of Paris. In addition to his courses in the Romance department he will give a course in Celtic, comprising Old Irish and comparative Celtic grammar.

Several new courses have been established, both for graduates and undergraduates. For the latter there will be a new course in Italian (3-4), "Introduction to the study of Italian literature." It will be given by Professor Speranza and will become a prerequisite for the higher courses. Professor Cohn's course on "Methods of teaching French" has been transferred to Teachers College, and he announces two new graduate courses, alternating with each other, "Special topics in seventeenth century French literature," and "Special topics in eighteenth century French literature." A parallel course, "Special topics in sixteenth century French literature," will be given by Professor Page, who will, during 1906-07, devote special attention to the *Pléiade*. Mr. Bargy announces a course dealing with French literature in its connection with social progress, in which the work of the great French writers dealing with sociology and politics will be studied.

Professors Cohn, Loiseaux and Page have during the present academic year delivered courses of lectures for the free-lecture system of the New York Board of Education.

FACULTY OF FINE ARTS

General.—The important action taken at different times during the past six months by the Trustees of the University and by the National Academy of Design has been commented upon in the editorial pages and elsewhere in the *QUARTERLY*, and does not require further mention.

The public lectures on the fine arts given by the University this year have been somewhat fewer in number, but have been more largely attended than in any one of the previous years, the attendance varying from 50 to 350. The course began on December 11 with a lecture by Professor A. V. Williams Jackson on "Ancient Persian sculpture," which was followed by four lectures on "The cathedrals of England" by Professor Hamlin. On January 29, Mr. C. P. Warren of the school of architecture gave an interesting lecture on the tall office-building as a problem in design, a lecture which was somewhat widely referred to in the public press. Professor Dow gave two lectures on February 5 and 12, respectively, the first on "Assisi and the Giottesques"; the

second on "Sesshu and the masters of Japanese landscape painting." The third series consisted of three lectures on "The paintings of the Metropolitan Museum of Art," delivered by Dr. George Kriehn on February 19 and 26 and March 5, respectively. On March 12 Professor Friedrich Hirth delivered a lecture on "Chinese pictorial art," and the entire course of lectures closed with a series of three talks by Mr. John V. Van Pelt, associate director of the Hastings atelier, upon "The principles of architectural composition."

School of Architecture.—A most noteworthy feature of the year's work so far has been the interesting and successful operation of the so-called atelier system, which is discussed in detail elsewhere in this issue. Examples of the work produced have been exhibited at the architectural exhibitions of the Architectural League of New York, and at the Architectural Clubs of Washington and Chicago, and have attracted considerable interest.

The School has recently received a magnificent model of two bays of Reims Cathedral; it was purchased with the gift made a few years ago by Mr. Alexander M. Welch of the class of 1890 in recognition of the scholarships granted him while a student in the School. The drawings for the model were made with great care by Professor E. Lorsch of the Drexel Institute, Philadelphia, and the production of the model was under the immediate direction of Professor H. Langford Warren, the head of the school of architecture of Harvard University. It is an unusually careful and finely finished piece of work, costing nearly one thousand dollars, and has been of great value to the students of mediæval architecture.

The competition for the Perkins fellowship in architecture, which is offered every four years, is at the time of this writing in progress. The competition consists of three parts—a sketch design occupying one week, for which the sketches were made on April 14; a sketch for the final design, which was made on April 21, and the final problem itself based upon this sketch, which is to be completed and handed in on or before May 26. The competition is open to all graduates of the Columbia School of Architecture who have graduated since April, 1900, but in the last stage—the five weeks problem—only five will be allowed to take part, these being selected by a jury upon the basis of the merit of their performance in the two sketches above referred to. The jury consists of Messrs. W. A. Delano, J. V. Van Pelt, J. R. Pope, Jr., and A. H. Gumaer of the School and Mr. Walter Cook and two other architects to be chosen by ballot by the competitors. The winner of this

fellowship will be required to spend a year in study and travel in Europe on a program to be approved by the president of the University and the head of the School.

A second competition for the Columbia fellowship under its new administration as a resident fellowship for graduate study in the School, which is hereafter to be awarded every year instead of biennially, will begin during the fortnight following Commencement. This is open to graduates who have received their degrees within the three years preceding the competition. Two candidates will present themselves this year for the degree of master of arts in the school of architecture, and possibly three. Several graduates now in Paris have completed abroad a portion of the work required for the master's degree, under the new arrangement proposed by Professor Hamlin a year ago, by which graduates of the school of architecture, studying in Paris or in Rome, are permitted to count as partial fulfilment of the requirements for the degree work done upon problems in design for which the programs are prepared by the authorities of the school of architecture at Columbia; they are furthermore privileged to count as minors towards the master's degree original research done during their travels, and courses taken in the Sorbonne or the Collège de France, the University of Rome and other institutions of like grade, when properly certified by the local authorities.

Professor W. R. Ware, professor emeritus of architecture, and formerly head of the School, has started for the Hague, where he will serve on the international jury to award the prize in the competition for the design of the palace for the international tribunal at the Hague. This building, as is generally known, was the gift of Mr. Andrew Carnegie, and one or two graduates of the School have entered the competition.

Professor Hamlin has lectured or given addresses during the winter at Washington, D. C., and at Meriden, Conn. He is at present conducting an important competition for a Y. M. C. A. building in Philadelphia, and has been engaged for a like service by the trustees of the City Library Association of Springfield, Mass. He delivered an address on "Mural painting and decorative sculpture, as relating to architecture," at the recent convention of the Architectural League of America. He has also been engaged by the trustees of the Public Library of Brooklyn as their professional adviser with reference to the projected enterprise of the new central building to be erected upon a property near the reservoir and the water-tower at the entrance to Prospect Park.

Department of Music.—One of the most noteworthy events of the past year has been the creation of a school of music at the University. This school will confer the baccalaureate degree in music, not heretofore given at Columbia. In addition, higher degrees in music will be conferred, and provision has been made for a course leading to a certificate of proficiency as well as for non-matriculated students in music.

Several concerts have been given during the year by the University Chorus and the University Orchestra under the direction of Professor Rübner. In addition, the Ladies' String Quartette gave a concert of chamber music on March 7. The Glee Club, which is now under the direction of Professor McWhood, has appeared in a number of concerts, both near New York and at a distance. In April a concert of original compositions by students in the department was given; and in May a concert of chamber music, including a trio for violin, violoncello and pianoforte, and several songs by Professor Rübner. The University orchestra will furnish the music at Commencement.

A series of public lectures, twenty-three in all, has been a feature of the year's work. Professor McWhood participated in the series, delivering a lecture on "The function and meaning of music." Professors Hallock and Farnsworth, from other departments of the University, delivered four and two lectures, respectively, in the series.

A very valuable addition to the resources of the department was made by the gift of the Anton Seidl Library. The departmental library has been considerably increased also in other ways. The equipment of the department has been enlarged by the loan of an Aeolian orchestrelle, for the study and illustration of musical compositions.

During the past year Professor Rübner has served as dean of the Washington College of Music. On April 30, by special invitation, he directed a performance of Mendelssohn's oratorio, *St. Paul*, by the Choral Society of Washington, with orchestra. In addition, Professor Rübner gave a pianoforte recital in Washington, and played at various concerts in New York (at the *Tonkünstler Versammlung*, and at the American Institute of Applied Music), in Englewood, in Passaic, in Elizabeth, and at Barnard College.

At the last annual meeting of the Music Teachers National Association, Professor McWhood delivered an address on "College entrance requirements in music"; he will speak at the approaching meeting on "Musical instruction in colleges and secondary schools." The West End Glee Club, a choral organization under his direction, recently gave its initial concert. During the past year he has been a member of a

joint committee representing the Eastern Educational Music Conference and the New England Education League, which prepared the statement of college entrance requirements in music that was adopted by the College Entrance Examination Board.

BARNARD COLLEGE

General.—It seems desirable to give in concise form information with regard to the program of studies for the new bachelor of science degree offered by the College. The prescribed courses are as follows:

English A (unless advanced English is offered for admission)	6 points
English B	6 "
French A and German A (unless their equivalents are offered for admission)	6 "
History A (unless advanced history is offered for admission)	6 "
Mathematics A (unless advanced mathematics is offered for admission)	6 "
Philosophy A	6 "
Physical education A and B	4 "
Grouped work in astronomy, botany, chemistry, geography, geology, mineralogy, physics, experimental psychology, and zoology, amounting to a total of	70 "
(Of these 70 points at least 28 shall be taken in a major subject; at least 12 points in an allied minor and at least 12 in a diverse minor)	

Free electives complete the total of one hundred and twenty-four points.

The relations established between Barnard and Teachers College so far as concerns options in the professional courses of Teachers College for candidates for a Barnard degree, as well as collegiate instruction of candidates for a professional degree in Teachers College, are discussed editorially in this issue.

Department of Classical Philology.—Some important changes will become effective in the coming academic year. Courses aggregating five hours per week will be offered in each of the four years; there will thus be a two-hour and a three-hour course for each year. The three-hour courses will be mainly linguistic, the two-hour courses largely literary in character.

Students electing the A.B. course will be required to take Latin in the first year. They may however elect the linguistic course, of which

Latin prose writing is a constituent element, or the literary course, in which Latin writing finds no place. In the linguistic course two hours per week will be devoted to reading Latin texts; the third hour weekly will be given up to the writing of Latin. In the literary course two hours will be devoted to reading texts, the third to lectures on Roman life and thought, the lectures to be supplemented by reading by the students. It is believed that this arrangement of the work will better meet the needs of the two great classes of students with whom the college has to deal, those who from the first are looking forward to careers as teachers of Latin, and those who prefer to study Latin mainly as literature.

The organization of the Greek work will be identical with that of the Latin work. Latin composition and Greek composition will, therefore, not be prescribed at any part of the course; they will be wholly elective studies. Besides the total of forty-one hours of instruction provided by the plan outlined above, there will be advanced courses in Greek and Latin writing, and the usual elementary course in Greek for students who desire to begin their study of Greek after admission to college.

Department of English.—During the present year there have been registered in English courses 490 students, as against 444 last year. Of these, 204 are in prescribed and 286 in elective courses. The number of courses offered is eleven, two of which are prescribed, and these are given by nine instructors of different grades, three of whom come by exchange from Columbia. Two new courses will be offered next year.

Department of Geology.—During the academic year 1904-05 Dr. Ogilvie, lecturer in geology, was absent on leave for purposes of investigation, and during her absence the work in geology at Barnard was suspended. Her field work involved the exploration of little known parts of British Columbia, California, Mexico and New Mexico. The investigation dealt principally with problems of glaciation and of petrology. During the summer Dr. Ogilvie was in the field for three months, working on the crystalline area of southern Maine. The results of all of these problems are being elaborated during the present winter, and as soon as finished will be published as Contributions of the department of geology of Columbia University.

The department of geology of Barnard reopened in October and the work of the winter has been conducted along the general lines pursued two years ago. A general course of two lectures weekly, with one

afternoon of laboratory or field work, has been given, covering the elements of physiography, lithology, and structural and historical geology. A new arrangement has been in force this year in accordance with which students can register for an extra point of credit and spend the additional time in special problems connected with the work of the general course. Three students have elected this special work.

The annual appropriation has been expended in much needed additions to the library and collection. The equipment is now a satisfactory one for elementary work, but lacks some of the essentials of advanced courses.

Department of Germanic Languages and Literatures.—The total registration in the courses in this department for the year 1905-06 is 203. Of the 162 students enrolled in elective courses, 32 are taking practical linguistic courses, 42 are in courses of a semi-literary nature, while 88 are doing purely literary work. Four students are enrolled in graduate courses, and one is a candidate for final honors.

Dr. Braun will give the course on Faust next year, Professor Thomas giving the course on the history of German literature. The advanced course on the German drama of the nineteenth century, given for the first time this year by Dr. Braun, has been elected by fifteen students. Important additions have been made during the year to the reference books on German literature in the Barnard reading-room and have been much appreciated by the instructors as well as by the students, who have found them a great convenience in the prompt preparation of assignments in the more advanced courses.

Department of Mathematics.—At the New Orleans meeting of the American Association for the Advancement of Science, Dr. Kasner was elected vice-president of section A (mathematics and astronomy) for the year 1906-07. Dr. Kasner's address on "The present problems of geometry," delivered at the International Congress of Arts and Science, has been translated into Polish by Professor Dickstein, editor of the *Wiadomosci matematyczne*.

Department of Philosophy and Psychology.—Such interest has been manifested in the courses in philosophy as to lead Dr. W. P. Montague to suggest the organization of a Philosophical Club. This has been formed with the intention of a somewhat freer and broader discussion of philosophical problems than it is possible to get in the regular lectures. It is hoped that the students in philosophy at Barnard may thus be able to listen to other members of the faculty than those who regularly lecture to them, as well as to scholars from outside the University.

TEACHERS COLLEGE

At the opening of the present year, the total registration of the College, including students from other parts of the University, passed, for the first time, the thousand mark. The primary registration, including students from other parts of the University who are candidates for Teachers College diplomas, is 845. There are in addition a thousand pupils in the Horace Mann Schools, and 200 in the Speyer School. There are over a thousand extension students coming to the College for partial work. The resident students come from forty states and territories, and from eight foreign countries. One-half of them are graduates of over a hundred other colleges, most of the remainder being graduates of normal or other professional schools. 139 students are candidates for the master's or doctor's degree, with a major subject in education, thus necessitating a steady enlargement of the departments giving such graduate work.

During the year the various undergraduate curriculums given by the College have been united into a single professional curriculum, leading to the bachelor's degree and diploma, providing, after the fundamental courses in educational psychology and in the history and philosophy of education, a choice of some twenty-five major subjects. The most interesting change in detail is perhaps that requiring of all students preparing to teach in high schools, in addition to preparation in their chosen subject for teaching, similar preparation in an additional subject, or a course in secondary education in general. Each of the departments offering such courses will next year add semi-professional courses, which will sum up for the prospective teacher the subject matter which is to be presented in high schools.

For students who have not had all of the academic preparation required for candidacy for the degree, a special curriculum of two professional years, with a choice of major subjects, and leading to a special diploma, has been established.

The recent decision on the part of Columbia College and of Barnard College to provide the academic work required for entrance to the professional curriculum of Teachers College enables Teachers College to withdraw its two year collegiate curriculum, and devote itself entirely to professional and graduate work. After the present year all freshmen, and after 1907, all sophomores will be referred to Columbia and Barnard Colleges. This will make possible, beginning with the coming year, considerable developments in the professional work in which the College is primarily interested.

It is gratifying to know that although the annual expense of carrying on the work of the College has increased to nearly \$400,000, the annual deficit which has always been so generously met by the friends of the College, is steadily decreasing. During the past year, donors have cancelled the entire debt of the College, namely \$220,000, thus securing Mr. Rockefeller's first contribution of \$250,000, which increases the endowment of the College to one half-million. Mr. Rockefeller's further promise of duplicating to the extent of \$250,000 all other gifts made before January 1, 1907, will make the endowment a round million. Minor gifts of interest are the establishment by The Daughters of Cincinnati of a tuition scholarship for the daughter of an army or naval officer, and the gift, by the United Daughters of the Confederacy, of an annual prize of \$100 for the best essay on some phase of the activity of the South before or during the Civil War.

During the year there have been a number of changes in the faculty of the College. Professor E. H. Castle, head of the department of history, resigned on account of continued ill health. Professor Henry Johnson of the Charleston, Ill., Normal School, has been appointed to succeed him. Professor Francis E. Lloyd, head of the department of biology, has accepted a position with the Carnegie Institution in its desert laboratory at Tucson, Arizona. Professor Herbert V. Abbott of the department of English left to accept a similar position in Smith College. Professor Louis Rouillion of the department of manual training has resigned to become director of the Franklin Institute, Boston.

The loss of Professor Runyan, whose death was noted in the *MARCH QUARTERLY*, came on the eve of extensive developments through which all of the Kindergarten interests of New York become centered at Teachers College. Professor MacVannel has been made director of the department. Miss Susan Blow has become a permanent lecturer in kindergarten on the College staff. Miss Patty Hill, of Louisville, comes to the College as an instructor along with Miss Fulmer, formerly of the University of Chicago, and Mrs. Langzettel, of the Froebel League, who becomes lecturer on kindergarten in the department of extension teaching. The department of domestic art has elaborated its work in connection with the Manhattan Trade School for Girls, founded and directed by Professor Woolman. Additional developments in the department, in the field of interior decoration, are soon to be announced. Very extensive developments are similarly in progress in the department of domestic science, the staff of which has been increased by the appointment of Miss Nutting of the Johns Hopkins Hos-

pital to a professorship of institutional management, and of Miss Anna Barrows of Boston as a lecturer. Professor Sherman, of Columbia, will in the future give the department's lectures on the chemistry of foods. Professor D. S. Snedden, of Leland Stanford, Jr., University, has been appointed adjunct professor of educational administration. In the department of mathematics, Professor Smith has placed at the disposal of his students his collection of mathematical books, pamphlets, portraits, autographs and medals of mathematicians, the largest private collection of the kind in existence. The collections of the department of fine arts have also been very much enlarged, especially by a gift of textiles from Professor Ross of Harvard and by the exchange of student work with other institutions, some as far away as Japan.

The last spring exhibit of the College attracted so much public interest that this year it will be held throughout an entire week. The Educational Museum has given a series of interesting special exhibits, and has had its permanent collections considerably increased by gifts and purchases from the St. Louis Exhibition.

Of the many activities associated with the College, interesting examples are the seventy clubs and classes for neighborhood work conducted by the Speyer School, in addition to its regular work; and the Sunday School, conducted at the College under the direction of Professor McMurry and Dr. Hodge.

Increasing interest in the publications of the College has led to the establishment of a new series of Contributions to Education. The numbers issued this year are as follows: "Normal school education and efficiency in teaching," by Professor Junius L. Meriam, now of the University of Missouri; "General taxation for education and the apportionment of school funds," by Professor E. P. Cubberly, now of Leland Stanford, Junior, University; "The rise of local school supervision in Massachusetts," by Professor Henry Suzzallo, now of Leland Stanford, Junior, University; "The educational theories of Herbart and Froebel," by Professor J. A. MacVannel of Teachers College, Columbia University; "City school expenditures," by Dr. George D. Strayer of Teachers College, Columbia University; "Some fiscal aspects of public education in American cities," by Professor E. E. Elliott, now of the University of Wisconsin; "A history of common-school funds in the United States," by Professor Fletcher Harper Swift, now of the University of Washington; "A history of sixteenth century arithmetic," by Professor L. L. Jackson; "The public primary school-system of France, with special reference to the training of teachers," by Pro-

fessor F. H. Farrington, now of the University of California. With one exception all are theses prepared by holders of fellowships in the College. The *Teachers College Record*, which is steadily growing in popularity, represents the work of the College for undergraduate students. Among the other educational publications now issued from the College are the *Journal of Geography*, edited by Professor Dodge; the *Nature Study Review*, by Professor Bigelow, and the *Plant World*, by Professor Lloyd.

The College, as usual, has been the host of numerous academic meetings, among the most recent of these being the Association of Teachers of Mathematics in the Middle States and Maryland, April 14; Eastern Public Education Association, April 17-18; Eastern Art Teachers Association and Eastern Manual Training Teachers Association, May 31 to June 2.

In the students' world an almost new social atmosphere has been produced by its social and rest rooms provided and attractively furnished by the Trustees. The Phillips Brooks Guild has been fortunate in the services of a resident general secretary. The *Bulletin* is in its second year of success as a student publication. A Student Year Book is approaching its first annual issue; and the severity of study has been tempered by a series of semi-academic and social functions, not the least interesting of which has been a group of excursions to points of educational or social interest in the City and its vicinity.

It is more than gratifying to know that the public appreciation of the results of this varied life of the College continues to increase. During the past year the appointment committee placed in positions of usefulness and profit 347 graduates or former students of the College, this meeting, however, scarcely one-fourth of the demand, the total number of requests for teachers exceeding 1200. The College is at present devoting much time and energy to the compilation of a complete and correct directory of graduates and former students.

COLLEGE OF PHARMACY

Of the 81 juniors who recently took the final examinations, 72 were passed; 167 out of 230 seniors were passed and 15 out of 18 post graduates who applied for examination.

The annual Commencement took place on April 26, at the Carnegie Music Hall.

SUMMARY OF UNIVERSITY LEGISLATION

THE TRUSTEES

February Meeting.—The Clerk announced the death, on January 20, of Charles A. Silliman, who was elected a Trustee in 1876.

The grateful thanks of the Trustees were tendered to Mrs. Maria H. Williamson, of New York, for her generous gift of \$150,000, to establish the Edward R. Carpentier Fund for the endowment of "a professorship or perhaps an endowed lectureship on the origins and growth of civilizations among men"; the donor reserving to herself and to her uncle, H. W. Carpentier, of New York, the right, during the lifetime of either, further to limit or define the purposes or uses of this fund.

The Trustees accepted with grateful thanks the generous offer of Mr. George Blumenthal, of New York, to give to the University the sum of \$100,000 for the endowment of a chair of Politics, and it was resolved that the fund so established be named the George Blumenthal Endowment Fund.

The thanks of the Trustees were tendered to Horace W. Carpentier, of the Class of 1848, for his gift of \$25,000, to be added to the principal of the James S. Carpentier Fund; also to Mr. Hugo Lieber, of New York, for his gift to the University for the use of the departments of physics and physiological chemistry, of radio-active material, including radium and various preparations, of the value of \$5,000.

The Trustees accepted with thanks the proposal of the graduates of the College, of the School of Mines and of the School of Political Science of the Class of 1881, to present the sum

of \$4,500 to be used for the erection on the plaza in front of the Library Building and on its east side, of a flag pole and suitable foundation, similar to the one already erected on the west side by Lafayette Post, G. A. R.

The thanks of the Trustees were tendered to the subscribers to the Alumni Commemoration Fund, the subscriptions amounting, for the current year, to \$1,253.92.

The thanks of the Trustees were tendered to Count Sergius Witte, of St. Petersburg, Russia, for his generous gift of five hundred and sixty-three volumes of Russian Public Documents.

The thanks of the Trustees were also voted to the anonymous donor of the sum of \$30,000, to be expended under the direction of the President in meeting the needs of the University; to Rutherford Stuyvesant, Class of 1863, for a gift of \$500 to the Bruce Astronomical Fund; to John Stanton for a gift of \$500 to the Special Fund for Mining and Metallurgy; to William G. Low, Class of 1865, for a gift of \$250 for the purchase of books on maritime and international law; to David L. Haight, M.D., Class of 1864, for a gift of microscopes and preparations for the department of physiology; to an anonymous donor of \$100 for the department of philosophy; to Miss Dina Osterberg for a gift of a technical library of books concerning the sciences of electricity, mathematics and physics, as a memorial of her brother, Max Osterberg, E.E., 1894; A.M., 1896; University Fellow, 1895-6, now deceased, to whom the library formerly belonged.

The thanks of the Trustees were

also voted to Stuyvesant Fish, Class of 1871, for a gift of a window in St. Paul's Chapel, in memory of Col. Nicholas Fish, Trustee of the College from 1817 to 1833, Treasurer in 1823, and Chairman of the Trustees from 1824 to 1832; to the widow and children of Frederic J. De Peyster, Class of 1862, for a similar gift in memory of members of the De Peyster family; and to Mrs. Ambrose C. Kingsland and Mrs. George W. Riggs for their participation in gifts of similar windows in memory of Ambrose C. Kingsland, Class of 1856, and Louis C. Cheesman, Class of 1878, respectively.

A proposed agreement between the University and the National Academy of Design, providing for cooperation, was approved, and the Clerk was authorized to execute the same on behalf of the corporation.

The special committee, appointed to prepare a suitable acknowledgment of the personal interest evinced by the German Emperor in the establishment of the Roosevelt professorship, reported that an address had been prepared and printed and handsomely bound with a copy of the history of the University and was ready for presentation. (See *The University*, p. 267.)

A resolution was adopted recommending the purchase by the City, for a public park, of the land lying between Riverside Drive and Claremont Avenue, one hundred and sixteenth and one hundred and twenty-second streets.

An invitation from the American Philosophical Society to send representatives to the celebration of the two hundredth anniversary of the birth of Benjamin Franklin, was received and accepted, and Mr. John B. Pine and Professor William M. Sloane were appointed to represent the University.

Upon the nomination of the Prussian Ministry of Education, Hermann Schumacher, Ph.D., professor of political economy in the University of Bonn, was appointed to be professor of German history and institutions for one year from July 1, 1906, with a seat in the faculty of political science.

Morris Weinrich, M.E., 1904, was appointed to be assistant in drawing from January 1, 1906, for the remainder of the academic year, vice T. Hamilton Burch, resigned.

Henry S. Patterson, M.D., was promoted to be chief of clinic and instructor in applied therapeutics.

Frederick H. Sykes, Ph.D., director of extension teaching, was given also the title of professor of English in extension teaching and assigned to the department of English.

The following resignations were accepted: James Brown Scott, J.U.D., professor of law, to take effect January 31, 1906; Amasa Trowbridge, Ph.B., adjunct professor of mechanical engineering, to take effect January 31, 1906; George B. Waterhouse, assistant in metallurgy, to take effect January 16, 1906.

George S. Fullerton, LL.D., professor of philosophy, and Joseph C. Pfister, A.M., adjunct professor of mechanics, were granted leave of absence for the remainder of the academic year.

March Meeting.—Horace W. Carpenter was elected a Trustee to succeed Charles A. Silliman, deceased.

The thanks of the Trustees were tendered to Mrs. Robert E. Livingston and John H. Livingston, of the Class of 1869, for their proposal to place a stained glass window, at a cost not to exceed \$1,500, in one of the spaces adjoining the large fireplace in Livingston Hall, as a memorial of Robert R. Livingston, of the Class of 1765.

The thanks of the Trustees were also voted to F. Augustus Schermerhorn, Class of 1868, for a gift of \$500 to be applied to increasing the equipment of the department of astronomy, and to the Hamburg-American Steamship Line and the North German Lloyd Steamship Line for their offer to furnish transportation to incumbents of the Roosevelt professorship.

It was resolved, that all requests for permission to place memorial tablets in St. Paul's Chapel be referred to the Committee on Honors for report as to the appropriateness of conferring this distinction upon the individual proposed; also that all memorial tablets hereafter to be erected in St. Paul's Chapel shall be of marble and of a design approved by the Committee on Buildings and Grounds and by the University architects.

It was resolved, that the recommendations contained in the report of the Committee on the Library, adopted March 5, 1906, be approved, and that the Librarian be and hereby is authorized to transfer to the Hispanic Museum of this City, such national and civic reports and other public documents of Mexico and the states of Central and South America as may be the property of the Library of this University, under an agreement similar in all respects to that now in force between the Library and the New York Botanical Garden.

The President reported that the Rev. Dr. S. Parkes Cadman had accepted an invitation to preach the Baccalaureate sermon.

The Statutes were amended by adding a new chapter, establishing a faculty of fine arts. This chapter reads as follows:

§ 160. The Faculty of Fine Arts shall consist of the President, the Dean, the President of the National Academy of

Design, the Director of the Metropolitan Museum of Art, of the professors in the Departments of Architecture and Music, and such professors in the Departments of Painting, Sculpture and the Decorative Arts as may be nominated by the President of the University and the National Academy of Design, acting jointly, to the Trustees for appointment in their discretion, and of such other professors as may be assigned to the Faculty by the Trustees.

§ 161. This Faculty shall have charge of the School of Architecture and the School of Music. It shall have power and it shall be its duty to fix the requirements for admission for such students in the School of Design as are candidates for a degree or other University recognition, the program of their studies and the conditions of graduation; to establish rules for ascertaining the proficiency of such students and the assignment of University honors; to fix the times of examinations in such courses; to prepare and publish from time to time a statement of the program of studies in such courses, specifying the studies to be pursued in each year and in each of the departments of instruction; and to make regulations for their own proceedings.

§ 162. The program of studies shall include instruction and research in the Departments of Architecture, Decorative Art, Music, Painting and Sculpture.

The following sums were appropriated for the maintenance and operation of the corporation for the fiscal year ending June 30, 1907:

For educational administration and instruction, buildings and grounds, the library, and business administration	\$1,191,460.48
For annuities.....	42,420.00
For taxes and other charges, exclusive of interest, upon the Williamsbridge and Loubat properties	85,660.00
For interest on the debt..	124,920.00

Making in all a total of. \$1,444,460.48

It was resolved, that the sum so appropriated be paid (1) out of the income and accumulation of invested funds applicable to such expenditures; (2) out of gifts for any of the purposes mentioned in the schedules; (3) out of the general income of the corporation; (4) out of special sources of income mentioned in the schedules; (5) out of interest receivable; (6) out of any funds that may be contributed for the purpose of guaranteeing or making good deficiencies; (7) out of moneys paid by Barnard College and Teachers College; (8) if necessary, by borrowing.

It was further resolved, that unless otherwise ordered by the Trustees, there shall be appropriated for the educational and business administration of the University for the year 1907-8, and annually thereafter, the sum of three hundred and eighty-two thousand seven hundred and eighty-three and 76-100 dollars (\$382,783.76) and no more, out of the rents to be received, and that the excess of rents in each year over said sum shall be appropriated exclusively to the liquidation of the debt and interest.

It was resolved, that an amount not exceeding \$9,000 be added to the appropriations for the department of mechanical engineering for the purchase of testing machinery, and charged to the income of the Phoenix Fund; that the sum of \$400 be added to the appropriations for the department of chemistry for the year 1905-6 to provide additional assistance; that the sum of \$400 be appropriated for the publication of the lectures of Professor Bjerknes and Professor Lorentz, from the income of the Ernest Kempton Adams Research Fund; and that the sum of \$500 be added to the appropriation to the school of medicine for the year 1906-7 for pathological work in

the department of obstetrics and charged to the income of the R. S. Carpentier Fund; the work to be carried on in the laboratory of the department of pathology.

Professor William Hallock was appointed dean of the faculty of pure science, vice Professor Edmund B. Wilson, resigned, and Professor James R. Wheeler was appointed acting dean of the faculty of fine arts.

Professor E. F. Nichols was appointed Ernest Kempton Adams Research Fellow for the year 1906-7.

Henry L. Moore, Ph.D., now adjunct professor of political economy, was promoted to be professor of political economy.

George C. D. Odell, Ph.D., now adjunct professor of English, was promoted to be professor of English, with a seat in the faculty of Columbia College.

Charles E. Lucke, M.S., Ph.D., now instructor in mechanical engineering, was promoted to be adjunct professor of mechanical engineering, with a seat in the faculty of applied science.

Curtis Hidden Page, Ph.D., now lecturer in the Romance languages and literatures, was promoted to be adjunct professor of the Romance languages and literatures, with a seat in the faculty of philosophy.

The appointment of Julian Blanchard (A.B., Trinity College, N. C., 1905) to be lecturer in physics from February 1 to June 30, 1906, vice R. F. Deimel, resigned, was confirmed.

Professors Wheeler, Young, Olcott and Hirth, and Mr. Edward Robinson, assistant director of the Metropolitan Museum, were assigned to seats in the faculty of fine arts.

The title of Professor James R. Wheeler was changed from "Professor of Greek" to "Professor of Greek Archaeology and Art."

April Meeting.—General Carpentier was elected a member of the committee on the library to succeed Mr. Silliman.

The President announced that the Rev. Alexis W. Stein had accepted the invitation of the Trustees to become chaplain of the University.

The committee on education reported a proposed arrangement with the City of New York for testing electric meters and appliances in the laboratories of the University and submitted a form of agreement which was approved.

UNIVERSITY COUNCIL

February Meeting.—The following resolutions were adopted:

Resolved, (I) That students shall be allowed to fulfill the requirements of two minor subjects for the degree of master of arts at the Union Theological Seminary.

(II) That students shall be allowed to fulfil all the requirements of the minor subjects, except that of the oral examination for the degree of doctor of philosophy, at the Union Theological Seminary.

The President appointed as a standing committee on cooperation with the Union Theological Seminary the representatives in the Council from the faculties of political science and philosophy, together with President Hall of the Union Theological Seminary, who was empowered to name a member of his faculty as a sixth member of the committee.

Resolved, That all essays for the degree of master of arts be furnished in duplicate—one copy to be deposited in the University library and a second copy to be given to the department in which the student is pursuing his major subject.

Resolved, That students under the faculties of political science, philosophy and pure science must matriculate within one week of the stated opening of the half-year, in order to obtain full credit for residence for that half-year, unless an extension be granted by the dean of the faculty concerned for reasons of weight.

Resolved, That it is the sense of the Council that it is inexpedient that the degrees of Columbia University should be conferred *cum laude*.

The following report and recommendation of the committee on higher degrees, to whom were referred certain questions arising out of the administration of Rule 10 of the regulations governing the higher degrees, was adopted:

Two questions are involved—

(I) The policy to be followed concerning students who, while still undergraduates in Columbia College and students in the Medical School, wish to enrol themselves as candidates for the degree of master of arts; and

(II) The advisability of retaining Rule 10 in its present form.

With regard to (I) the committee would point out that a precedent has been formed by the committee on higher degrees which seems to provide a proper way of meeting all such cases. It has happened in several instances recently that undergraduates in Columbia College and Teachers College who had but a few points to acquire toward the baccalaureate degree have found themselves well able to carry on at the same time a part or even all of the work required for the master's degree. The admission of such candidates to the graduate courses naturally depends upon the recommendation of the professors concerned, and when this has been given and the work performed, the student, after receiving the bachelor's degree and matriculating as a candidate for the master's degree, has applied to the committee on higher degrees for permission to count these courses towards the higher degree. If the departmental reports upon such work have been satisfactory and the dean of the faculty concerned has recommended such action the committee on higher degrees has granted such applications. The degree of master of arts is in no case granted until a full academic year has elapsed since the bachelor's degree was conferred; and it should be pointed out that students who thus receive the privilege of attending graduate courses are not regarded as candidates for the higher degrees as long as they are technically

still undergraduates, because such candidacy is possible only to holders of the first degree. Of course no work which has been counted toward the first degree is allowed to be counted toward the second. As such admission to graduate courses and the privilege of counting them for the higher degree when satisfactorily completed depend primarily upon the recommendation and consent of professors and deans concerned, a double control is exercised. The committee believes that in the application of this principle throughout the University a solution of the problem will be found.

As regards (II) the Committee regards the requirement of one minor subject, to be taken in addition to the work for the professional degree, as too small. It would recommend that Rule 10 as now existing be abolished, and that the following be substituted:

"Students holding the required first degree who are primarily registered in a professional school of Columbia University, or in an allied professional school, may be registered as candidates for the higher degrees in the faculty of political science, the faculty of philosophy, or the faculty of pure science. In such a case the candidate must take his major subject under one of these faculties, and must conform to all its rules as regards examinations, essays and dissertation; but he may offer, as the equivalent of the two minor subjects, such of his professional courses as may be approved for that purpose by the dean of the faculty under which the major subject is taken and by the committee on higher degrees."

The Committee desires to point out that the rule above proposed reproduces the arrangement now existing between the faculties of political science and the faculty of philosophy on one hand and the Union and the General Theological Seminaries on the other. It seems to the committee that this arrangement may well be extended to govern the relations between the three faculties primarily concerned and all the professional schools.

The following appointment was made to a University scholarship for the second half of the academic year, 1905-06:

Comparative Literature
McQuilkin De Grange.

Frederick, Md.

A.B., Johns Hopkins University,
1900.

LL.B., Catholic University of
America, 1902.

The following resolutions were adopted:

Resolved, (I) That the University confer the degree of doctor of pharmacy in 1906 and 1907 upon such of the graduate students of the College of Pharmacy as are entitled thereto under the existing arrangement; and

(II) That the said degree be conferred in the years named, upon such as are entitled to receive the same from the College of Pharmacy, provided that at the time of entering upon the course leading to the degree of graduate in pharmacy, they possessed the educational qualification now required for entrance to the University course, and provided that they received the degree of graduate in pharmacy in the year 1900, or subsequently.

April Meeting.—The following fellowships were awarded:

UNIVERSITY FELLOWSHIPS

Frank Chester Becker, Plymouth, Pa., philosophy; Henry Kreitzer Benson, Seattle, Wash., physical chemistry; Robert Emmet Chaddock, Wooster, Ohio, sociology; Claude Moore Fuess, Waterville, N. Y., English; Carl Frederick L. Huth, Milwaukee, Wis., ancient and mediæval history; Nicholas August Koenig, New York City, Semitic languages; Francis Church Lincoln, New York City, geology; John Angus Campbell Mason, Stratford, Ont., modern European history; Edward McChesney Sait, Toronto, Can., political science; Edward Sapir, New York City, linguistics and anthropology; Fred Jay Seaver, Mt. Pleasant, Ia., botany; Charles Rupert Stockard, Columbus, Miss., zoology; Harold Worthington Webb, Glen Ridge, N. J., physics; Charles Clarence Williamson, Salem, Ohio, political economy.

HONORARY FELLOWSHIPS

George Wilber Hartwell, Albion, Mich., mathematics; Howard Lee McBain, Richmond, Va., constitutional

law; Alfred Horatio Upham, Eaton, Ohio, comparative literature.

ENDOWED FELLOWSHIPS

Tyndall Fellowship: Frederic Columbus Blake, Leadville, Colo.—*Drisler Fellowship*: Charles Jones Ogden, New York City.—*Garth Fellowship*: James Henry Gilbert, Eugene, Ore.—*Mosenthal Fellowship*: William Jacob Kraft, Mamaroneck, N. Y.—*Proudfit Fellowship in Letters*: Charles Francis Lawson, New York City.—*Schiff Fellowship*: Samuel George Nissenson, New York City.—*Carl Schurz Fellowship*: Henry Hermann Louis Schulze, Yonkers, N. Y.

TEACHERS COLLEGE FELLOWSHIPS

Julian Ashby Burruss, Richmond, Va.; Percival Richard Cole, Sydney, New South Wales; Herbert Thomas John Coleman, Toronto, Ont.; Nellie Esther Goldthwaite, South Hadley, Mass.; Joseph Lindsay Henderson, Tyler, Tex.; Arthur Julius Jones, Grinnell, Ia.; Samuel Chester Parker, Oxford, Ohio.

Professor Crampton, and Messrs. Goetze and Keppel were appointed a committee on Commencement.

Professor George William Knox was appointed a sixth member of the standing committee on cooperation with the Union Theological Seminary.

Resolved, that the secretary of the Council be authorized to issue a certification to those candidates for the degree of doctor of philosophy who have been recommended to the President for the bestowal of the degree, but have not yet filed the printed dissertation with the Registrar of the University, to the effect that with this exception they have fulfilled all the requirements for the degree.

Resolved, that the summer session

courses, as printed in the announcement of the summer session of 1906 in partial fulfilment of the requirements for the degree of master of arts, be approved.

TEACHERS COLLEGE

February Meeting.—The announcement was received of the promotion of adjunct professor MacVannel to be professor of the philosophy of education and director of the department of kindergarten, and of the appointment of Professor Henry Johnson of the Charleston, Ill., State Normal School, as head of the department of history to succeed Professor E. H. Castle, who has resigned because of continued ill health. The appropriation by the Trustees of a special publication fund and the appointment of Professors Thorndike, Lodge, Dodge, and Bigelow, and Secretary Furst as a board of publication were also announced.

In view of the agreement by Columbia College and Barnard College to maintain, as prerequisite to the professional curriculum of Teachers College, a two years collegiate curriculum including such courses as Teachers College may desire, it was resolved that Teachers College shall receive no freshmen after 1906 and no sophomores after 1907, and make no announcement of a collegiate curriculum during the term of this agreement.

The following new courses of instruction were established: Biology, 53-54, applied biology, 4 points; English, 53-54, literary forms, 6 points; German 51-52, modern German grammar, 6 points; German 101-102, modern German syntax, 6 points; German 103-104, phonetics, 4 points; Latin 101-102, Latin readings, advanced, 4 points; and manual training 13-14, evolution of typical industries, 6 points.

THE ALUMNI

Columbia University Club

The Columbia University Club now numbers 812 resident and 131 non-resident members. The attendance at the Club House continues to increase and several very successful smokers have recently been given. It is proposed to reconstruct the stable on the rear of the lot owned by the Club, in order to provide two squash courts.

The new Year Book has just been issued. From its prefatory remarks we note that the Club is now in a most flourishing condition and simply awaits an increased membership before utilizing all of the lot owned by it at the corner of Gramercy Park and Irving Place for club purposes; and that it is hoped within the next few years to be able to erect a substantial building on that part of the lot which is now occupied by the stable and dining-room platform, so as to have not only additional rooms for those living at the Club, but also to provide a large meeting hall where Club and University affairs can be held.

Columbia College

The College Alumni Association has undertaken to meet the cost of carving the seals of Kings College, of the Regents of the University of the State of New York, and of Columbia College, on the south façade of Hamilton Hall. The three seals represent the historic sequence of the corporate existence of the College—under the Governors of Kings College from 1754 to 1784; under the Regents of the University from 1784 to 1787; and under the Trustees of Columbia College from 1784 to the present time. The association has also decided to present a number of framed portraits of distinguished alumni, accompanied by autograph letters, to be hung in the Dean's office and in the College Library.

School of Law

The Law School Alumni Association at its last annual meeting elected as president the Hon. Morgan J. O'Brien, '75, LL.D., to succeed the Hon. E. H.

Lacombe, '65, who declined a reelection. The following vice-presidents were elected: George L. Rives, '73, W. B. Hornblower, '75, and Adrian H. Joline, '72. William Parmenter Martin, '92, and Frederic White Shepard, '97, were reelected treasurer and secretary, respectively. The annual report of the standing committee, which has been printed and distributed, shows that the membership of the association now numbers 408. On November 20 the association gave a dinner to the Hon. Morgan J. O'Brien, its then vice-president, in honor of his appointment as presiding justice of the Appellate Division, which was attended by over two hundred members of the bench and bar. The sub-committee on law clerkships reported that it had made a satisfactory beginning and had assisted a number of graduates of the school to obtain positions in law offices. The association has just issued its annual report.

College of Physicians and Surgeons

The annual meeting of the P. & S. Alumni Association was held on January 30, 1906, at the Hotel Astor. The following officers were elected for the year: Dr. T. M. Cheesman, '74C., '78, P.andS., president; Dr. W. K. Draper, '88, vice-president; Dr. W. R. Williams, '95, secretary; Dr. H. E. Hale, '96, assistant secretary; and Dr. W. G. LeBoutillier, '80C., '83 P.andS., Dr. C. A. McWilliams, '95, Dr. C. H. Peck, '92, and Dr. August Wadsworth, '96, councilors.

Long Island P. and S.

The annual meeting of the Long Island Alumni Association of the College of Physicians and Surgeons was held on February 16, 1906, and the following officers were elected for the ensuing year: Dr. D. D. Roberts, '98, president; Dr. W. A. Sherwood, '97, treasurer and secretary; and Dr. H. G. Webster, '95, Dr. A. M. Judd, '93, and Dr. H. P. deForest, '90, trustees.

Civil Engineering

On the evening of April 14 the graduates of the school of civil engineering assembled at a dinner held in the banquet hall of the Hotel Astor. There were over one hundred graduates present, representing classes from 1876 to 1906. This reunion is the second of its kind, the first having been held in March, 1905. The toastmaster of the evening was Mr. William Barclay Parsons, and the speakers included President Butler, Professor Burr, Mr. Henry F. Hornbostel, and President Alexander C. Humphreys of Stevens Institute.

School of Architecture

At a meeting of the Society of Columbia University Architects held at the Architectural League of New York, on Tuesday, April 24, the following officers were elected for the ensuing year: D. E. Waid, '92, president; J. M. Hewlett, '90, first vice-president; Henry Hornbostel, '91, second vice-president; W. W. Jackson, '92, recorder; Goldwin Goldsmith, '96, treasurer, and H. S. Kissam, '86, secretary.

Several important undertakings have been discussed and placed in the hands of committees for report to the board of governors; among these may be mentioned the holding of an exhibition and dinner in the coming fall to celebrate the quarter centenary of the birth of the school; the publication of a quarterly bulletin of information as to the school and the society; the securing of some headquarters for the society where its records may be kept and where some representative may be constantly on hand.

The annual dinner for all the former students of the school will be held under the auspices of the society, probably on Classday, June 11.

Huger Elliott, '99, who returned last fall from a four-years' period of study and travel in France and Italy, is assistant in design in the school of architecture of the University of Pennsylvania. He has recently completed for the department of fine arts of Vassar College a large water-color copy of the great fresco by Taddeo Gaddi in the Spanish chapel of Santa Maria Novella, Florence.

F. A. Nelson, 1900, has returned from Paris, where he received the *Diplôme du Gouvernement* in architecture in the *Ecole des Beaux-Arts*, and is at present with Delano and Aldrich (W. A. Delano, special, '95; C. H. Aldrich, '93) in their office at 4 East 39th street.

H. F. Hornbostel, '91, architect of the Carnegie Technical Institute at Pittsburgh, is also professor of architecture in the schools of the institute, with a class of over sixty draftsmen under his instruction. He is also the author of the preliminary design for the proposed University stadium along the banks of the Hudson.

Louis Brown, whose death was announced in April, was a non-graduate member of the class of 1888, and was at the time of his death associated with Mr. Hornbostel as architect of the new Alpha Delta Phi Club building.

There are at present in Paris, for the most part registered in the *Ecole des Beaux-Arts*, seven graduates and fifteen non-graduates of the school of architecture. The graduates are J. T. Hanemann, 1902, W. H. Beers, 1903, R. H. Dana, Jr., 1903, Shepherd Stevens, 1903, John Wynkoop, 1903 (holder of the Paris prize of the Society of Beaux-Arts Architects, won in 1905), E. C. Dean, 1904, and W. R. Powell, 1904.

Doctors of Philosophy

On the evening of April 18 there was organized at the Columbia University Club the Association of Doctors of Philosophy of Columbia University, which purposes to bring the holders of the doctorate from Columbia University together socially, to keep them in touch with the institution and with one another, and to promote the best interests of the University, of the doctorate and of the members of the association. The first formal meeting of the new organization is to be held at Commencement, on the afternoon of June 13, 1906, and it is expected that a large membership will be secured before that time, inasmuch as considerable interest has been shown in the movement from its inception, particularly by out-of-town graduates. Permanent officers are to be elected at the Commencement meeting, until

which time the executive control of the new organization is to be invested in the temporary chairman, Professor Rudolf Tombo, Jr., the temporary secretary-treasurer, Dr. C. A. Beard (Columbia University), and a committee of three to be appointed by the chair. This is the ninth local alumni association thus far established, the others being those of Columbia College, the School of Law, the College of Physicians and Surgeons, the Schools of Applied Science, the School of Architecture, Teachers College, Barnard College, and the College of Pharmacy.

Alumni Council

The Alumni Council has recently been reorganized under a modified agreement of union which will materially increase its efficiency, and the following representatives have been elected by the associations: From the College Association, Willard V. King, '89, John B. Pine, '77, and J. Howard Van Amringe, '60; from the Law School Association, Howard Van Sinderen, '83, Gustavus T. Kirby, '98, and George W. Kirchwey (Dean); from the P. and S. Association, John G. Curtis, M.D., '70, Frank W. Jackson, M.D., '79, and Walter Mendelson, M.D., '79; from the Schools of Applied Science Association, Eben E. Olcott, '74, James F. Kemp, '84, and Francis B. Crocker, '82.

The annual visitation of the various western alumni associations was made this year by the Registrar of the University, at the request of the Alumni Council. This was the third year in which these visitations have been undertaken, Dean Kirchwey having represented the Council in 1904, and Dr. Canfield in 1905. As the latter pointed out in the *QUARTERLY* last year, these visitations are simply in the nature of an oral report on the work of the year and the general development of the University, and are not begging or proselyting expeditions. A set of lantern slides had been prepared in advance and the views of the University, old and new, aroused great interest; all of the meetings were unusually successful and much enthusiasm for *alma mater* was shown. New associations were established at Pittsburgh, Indianapolis, Louisville, Cleveland, Columbia, Mo., and Madison, Wis. A brief account of the various meetings follows:

District of Columbia.—The annual meeting and dinner of the District of Columbia Alumni Association was held at the home of its president, Mr. John Cropper, 1742 M Street, Washington, D. C., on the evening of March 3. At the business meeting officers were elected for the ensuing year, as follows: John Cropper, '70C., president; Arnold Hague, honorary Sc.D., 1901, William Dudley Foulke, '69C., '71L., Larkin W. Glazebrook, '90(P. and S.), and William R. Hillyer, '61C., vice-presidents; George O. Totten, Jr., '91A., secretary, and Marcus Benjamin, '78S., treasurer. At the dinner an address was delivered by the Cuban Minister, Gonzalo de Quesada, '91S., and the present condition and prospective development of the University were outlined by the representative of the Alumni Council. In addition to those mentioned above, the following Columbia men attended the meeting: S. S. Laws, '70L., Dr. W. Duncan McKim, '75C., '78(P. and S.), H. M. Wilson, '81S., Robert Fitch Shepard, '70C., '76L., G. K. Richards, '89C., Alpheus Winter, 1900(Pl.), Harry Hull St. Clair, 2d, 1900C., John M. Gitterman, '92(Pl.), Samuel Crandall, 1904(Pl.), David L. Wing(Pl.), Walter M. Gilbert, and Francis Walker, '95(Pl.).

Pittsburgh.—On Friday evening, March 16, a number of Columbia alumni met at the Union Club and organized the Columbia Alumni Association of Pittsburgh. Professor F. T. Aschman of the Western University of Pennsylvania served as chairman of the meeting. A telegram of congratulation from President Butler was read, and the representative of the Council addressed the meeting. The following officers were elected: President, G. Harton Singer, '80; vice-presidents, C. A. Painter, '84, and W. A. Bostwick, '98; secretary-treasurer, Hugh P. Tiemann, 1900; executive committee, (for one year) Dr. J. P. Shaw, '90, (for two years) Jas. M. Clark, '87, (for three years) Dr. Richard B. Faulkner, '75. The following men were present: J. P. Shaw, '90(P. and S.), A. H. Anderson, 1903L., F. T. Aschman, '81S., P. S. Ache, 1903L., O. M. Sanford, '80C., J. G. Connell, '77(P. and S.), R. B. Faulkner, '75(P. and S.), G. H.

Singer, '80S., G. D. Miller, 1901L., S. L. Rushlander, 1901L., J. P. McKelsey, 1901(P. and S.), E. W. Bartberger, 1900S., J. M. Clark, '87L., and H. P. Tiemann, 1900S. The first annual dinner of the new association was held at the Union Club on May 11, and was attended by Professors Chandler and Stoughton of the University.

Indianapolis.—The first annual dinner of the Columbia University Club of Indiana was held in the University Club of Indianapolis on the evening of March 17. The following toasts were given, Edward Daniels, '77L., acting as toastmaster: "The Columbia University Club of Indiana," L. A. Bacon(T.C.); "Reminiscences," G. G. Briggs, '88L., president of the recently organized Louisville Alumni Association; "Columbia's past record," Dr. L. N. Chase, '95C., instructor in English at the University of Indiana; "The small College," Dr. D. C. Brown, acting president of Butler College; and "The future of Columbia University," Professor Rudolf Tombo, Jr. Among the Columbia graduates and guests present were Edward Daniels, '77L., George G. Briggs, '88L., Dr. L. N. Chase, '95C., Francis O. Dorsey, '96(P. and S.), Thomas Bloomfield, '90L., Paul F. Martin, 1900(P. and S.), H. L. Smith, 1905(T.C.), W. A. Jessup, 1905(T.C.), Theophilus J. Moll, '98(Pl.), Franklin S. Hoyt, 1905(T.C.), Oscar L. Pond, 1902L., B. V. Moore, 1904L., M. Thorner, '98(P. and S.), H. R. Faunce, 1902(T.C.), Daniel W. Layman, '98(P. and S.), C. F. New, 1904(P. and S.), J. L. Massena, 1903(T.C.), Russell Trall Byers, 1901L., Harry J. Milligan, '78L., Louis A. Bacon, 1900(T.C.), Norman Hackett, '98 University of Michigan, and Dr. Demarcus C. Brown.

St. Louis.—The fourth annual dinner of the St. Louis Alumni Association was held at the St. Louis Club on Monday, March 19. Dr. H. N. Spencer, '68(P. and S.), served as toastmaster, and addresses were made by Bishop Daniel S. Tuttle, '57C., Arthur Thacher, '77S., and Professor Tombo. At the business meeting the following officers were unanimously elected for the ensuing year: President, Hon. Julius S. Walsh, '64L.; vice-president, Leon Harrison, '86C.; and secretary-

treasurer, Dr. George M. Tuttle, '88C., '91(P. and S.). The dinner was attended by the Rt. Rev. Daniel Sylvester Tuttle, S.T.D., LL.D., '57C., Dr. H. N. Spencer, '68(P. and S.), Philip N. Moore, '74S., Arthur Thacher, '77S., Otto M. von Schrader, '82L., H. A. Wheeler, '80S., Dr. George M. Tuttle, '88C., '91(P. and S.), Dr. Hartwell N. Lyon, '90(P. and S.), Dr. George E. Lyon, '90(P. and S.), Dr. John A. Calnan, '94(P. and S.), Laurence Ewald, '96A., Guy C. Mariner, '96A., Louis Le Beaunce, '97A., Gustavus Sessinghaus, '98S., L. D. Turner, Jr., 1901L., Wilbur T. Trueblood, 1900A., and Samuel R. Fowler, 1902L.

Columbia, Mo.—On the evening of March 20, at Columbia, Mo., the Columbia University Alumni Association of Central Missouri was formed with the following charter members: Earl R. Bradsher, A.M., 1904, Walter W. Cook, '94C., William H. Cook (T.C.), Jesse H. Coursault (T.C.), William B. Elkin (T.C.), James T. Gerould, Frank P. Graves, '90C., Edward W. Hinton, '91L., Isidor Loeb, Ph.D., 1901, Junius L. Meriam, Ph.D., 1905, Ernest E. Morgan (Pg.), Jesse E. Pope, 1900(Pl.), and Albert S. Reed (Ph.). Professor Graves was elected president and Professor W. W. Cook, secretary and treasurer. On the same evening Professor Tombo lectured before the German Club of the University of Missouri on "Faust," and earlier in the day he gave an illustrated lecture to the students of the university on "Columbia University."

Kansas City.—At the Baltimore Hotel on March 21, the Kansas City Alumni Association of Columbia University held its second annual dinner. The following officers were reelected for the coming year: President, the Rt. Rev. Edward R. Atwell, '62C.; vice-presidents, Rev. Theodore B. Foster, '79C., Hon. Henry L. McCune, '86L., and Robert McE. Schaffner, '96(P. and S.); secretary, John C. Meredith, '86L., and treasurer, Edward G. Blair, '89(P. and S.). With the exception of the president, who was out of town, all of the officers were present, as well as Lester W. Hall, 1901L., Alfred Gregory, '84L., G. E. Bellows, '85(P. and S.), and the representative of the Council, who delivered an illus-

trated talk on the progress of the University during the past year.

Denver.—The eleventh annual banquet of the Alumni Association in Colorado was held at the University Club, Denver, on the evening of March 24, 1906. At the business meeting which preceded the dinner, James D. Benedict, '99L., was elected president, F. H. McNaught, '78(P. and S.), vice-president, and Raymond J. McPhee, 1905L., secretary and treasurer. In addition to the above, the meeting was attended by Dr. Charles A. Powers, '83(P. and S.), William L. Dayton, '80L., Alfred Mann, '92(P. and S.), W. Allen Johnson, '53C., J. Barent Johnson, 1900C., Calvin Whiting, '82L., all of Denver; Charles Clyde Spicer, 1904L., and Daniel J. Scully, '99(P. and S.), of Colorado Springs; Francis E. Bouck, Ph.B., '95, of Leadville, and Joseph Hershey Bair, Ph.D., 1903, of Boulder, Col. Mr. James D. Benedict served as toastmaster, and addresses were made by the Rev. W. Allen Johnson, Dr. Charles A. Powers, Professor Tombo, and several others.

Omaha.—The annual meeting of the Columbia Alumni Association of Nebraska was held at the Omaha Club, Omaha, on the evening of March 26. The officers of the association, consisting of Victor Rosewater, Ph.B., '91, Ph.D., '93, president; M. C. Geisthardt, '92L., vice-president, and W. F. Milroy, '82(P. and S.), president of the Omaha Medical College, secretary-treasurer, were unanimously reelected. After the business meeting Professor Tombo gave a full account of the recent growth of the University.

On the evening of March 27, Professor Tombo lectured on "Faust" before the Humboldt Society of Iowa College, Grinnell, Iowa, and also gave an illustrated talk on Columbia University before the students of the College.

Madison, Wisconsin.—The Columbia Alumni Association of Madison (Wisconsin) was organized at a smoker given to Professor Tombo by the Columbia graduates on the faculty of the University of Wisconsin and those resident in Madison on the evening of March 28. There are no less than twenty-one Columbia men in Madison, of whom eighteen are teaching at the

University of Wisconsin. With three or four exceptions, all of these attended the smoker, and great interest was shown in the report of the University's progress. The membership list of the new association is as follows: D. Earle Burchell, 1904C., Arthur Beaty, Ph.D. 1897, Charles H. Burnside, '98, W. F. Dearborn, Ph.D. 1905, J. F. Dilworth, A.M. 1903, Thomas H. Dickinson, A.M. 1900, Edward C. Elliott, Ph.D. 1905, Richard T. Ely, '76, Hermann Hilmer, A.M. 1905, Stanley C. Hanks, '98L., Reginald H. Jackson, '99(P. and S.), John L. Kind, Ph.D. 1906, Ulrich B. Phillips, Ph.D. 1902, D. L. Patterson, 1904(Pl.), Frederick W. Roe, A.M. 1904, L. P. Shanks, A.M. 1904, Charles W. Stoddart, 1900C., A.M. 1901, Charles S. Sheldon, 1868(P. and S.), C. A. Tibbals, Jr., 1903S., Augustus Trowbridge, '92S., and E. C. Wooley, Ph.D. 1901. In addition to the above Miss F. C. Berkeley, A.M. 1905, is an instructor in English at the University of Wisconsin. Dr. John L. Kind presided over the meeting and appointed a committee of three, which submitted a constitution at the next meeting, held on April 10. The constitution was formally adopted and the following officers were elected: President, Dr. J. L. Kind; vice-president, Dr. U. B. Phillips, and secretary, D. L. Patterson.

Before the smoker, Professor Tombo delivered a lecture on "Faust" under the auspices of the *Germanistische Gesellschaft*.

Milwaukee.—The second annual dinner of the Columbia Alumni Association of Wisconsin was held at the Plankinton Hotel, Milwaukee, on March 29. The president of the Wisconsin Association, Dr. Louis G. Nolte, '86(P. and S.), presided at the dinner and business meeting; at the latter a formal constitution was adopted and the following officers were elected for the ensuing year: President, Dr. L. G. Nolte; vice-presidents, Arthur C. Klettsch, '93C., '96L., C. S. Carter, '79L., Dr. David C. Pierpont, 1903(P. and S.), H. W. Buemming, '95A., and John L. Kind, Ph.D., 1906; secretary, Alfred W. Gray, '99(P. and S.), and treasurer, Cornelius J. Haring, '83L. Besides the above there were present: Judge Warren D. Tarrant, University

of Wisconsin, 1890, Samuel E. Hall, '79L., Fred G. Hunt, '83L., and Professor Tombo.

Chicago.—The annual dinner of the Illinois Association was held at the University Club, Chicago, on March 30. John A. Ryerson, '85C., acted as toastmaster. At the business meeting he was reelected president, and George S. Rice, '87S., was reelected secretary-treasurer. The following Columbia men were present: Judge J. M. Dickinson, '72L., H. L. Hollis, '85S., Victor Elting, '91C., John J. Krause, 1904L., C. C. H. Zillman, '97L., C. E. Merriam, 1900(P.), Charles L. Johnson, '89L., Dr. Edward Gudeman, '87S., F. Hedley Jobbins, '95S., George G. Throop, '85C., G. H. Scribner, Jr., '83S., W. M. Fiske, 1900C., John A. Ryerson, '85C., and George S. Rice, '87S.

Cleveland.—The first annual dinner of the Columbia Alumni Association of Ohio was held at the University Club, Cleveland, on March 31, and was a success from every standpoint. Dr. H. E. Handerson, '67(P. and S.), presided and the speakers were President Charles F. Thwing of Western Reserve University, Professor Tombo, George H. Danton, 1902C., Dr. Charles E. Slocum, '69(P. and S.), R. F. Denison, 1900L., L. Stewart Thurston, 1901S., and W. R. Watterson, '92A. A permanent organization was established and the following officers were elected: President, Dr. H. E. Handerson, and secretary-treasurer, George H. Danton. In addition to those mentioned above, the following were present: J. B. Mooney, '78L., Samuel P. Orth, Ph.D., 1903, Myron H. Wilson, '77L., Dr. H. G. Sherman, '80(P. and S.), E. W. Brouse, 1905L., Howard B. Merrill, 1902C., Dr. John H. Lowman, '77(P. and S.), and Clifton M. Windecker '92S. The members present hailed from Cleveland, Columbus, Akron, Barberton, and Painesville, O.

Rochester.—The fourth annual dinner of the Columbia Alumni Association of Western New York was held at the Masonic Club, Masonic Temple, Rochester, N. Y., on the evening of April 2. The Rev. Dr. Rob Roy Converse acted as toastmaster, and addresses were made by Joseph H. Gilmore, Ph.D., of the University of Ro-

chester, who spoke on Rochester's indebtedness to Columbia, the Hon. George A. Benton, whose subject was, "Then and now," and Professor Tombo, who gave an illustrated talk on the University. The following officers were elected for the ensuing year: Hon. Joseph Bondy, '84L., president; Dr. S. L. Elsner, '87(P. and S.), vice-president; Charles C. Farnham, '89L., secretary-treasurer. It was decided to hold two dinners each year, instead of one as heretofore, one at Syracuse alternating with Utica in December, and the other at Rochester alternating with Buffalo in March. The following members were present at the dinner: From Rochester, George A. Benton, '74L., Charles S. Starr, '69(P. and S.), Paul F. Sondner, '96(P. and S.), W. T. Mulligan, '96(P. and S.), William B. Jones, '84(P. and S.), Rev. R. R. Converse, '76S., J. L. Roseboom, '80(P. and S.), F. D. Anderson, '87(P. and S.), Porter Farley, '74(P. and S.), E. Wood Ruggles, '88(P. and S.), Robert L. Carson, '90(P. and S.), John C. O'Connor, 1904(P. and S.), Francis J. O'Brien, '99(P. and S.), Edward G. Nugent, '97(P. and S.), S. L. Elsner, '87(P. and S.), Charles E. Darrow, '81(P. and S.), and N. W. Soble, '87(P. and S.); from Buffalo, Lee H. Smith, '81(P. and S.), Charles C. Farnham, '89L., Eugene E. Falk, '87L.; from Syracuse, Hon. Joseph H. Bondy, '84L.; from Fairport, C. R. Cramer, '77(P. and S.); from Sodus, J. F. Meyers, '87(P. and S.); from Elmira, H. D. Wey, '78(P. and S.).

San Francisco Alumni Association

The annual meeting of the Alumni Association of Columbia University in California was held on January 27, 1906, at the University Club. The following officers were elected for the ensuing year: Dr. H. M. Sherman, '80, president; Henry Eickhoff, '75L., vice-president; J. E. deRuyter, '83, treasurer, and Dr. J. C. Spencer, '82C., '85(P. and S.), secretary. Dr. James A. Hart, '73(P. and S.), of Colorado Springs, and Mr. Benjamin H. Dibblee, of Harvard, were guests at the dinner.

The association gave a dinner on the evening of March 14, 1906, at the Pacific Union Club, to Professor W. H. Carpenter and Mr. F. P. Keppel, the

delegates of Columbia University to the seventh conference of the Association of American Universities. There were about twenty members present, including the officers of the association.

Louisville Alumni Association

The graduates of Columbia University, residing in Kentucky, held a meeting on February 26, 1906, at the Galt House, Louisville, Ky., and organized an alumni association to be known as the Alumni Association of Columbia University in Louisville, Ky. The following officers were elected: President, Geo. G. Briggs, '88L.; vice-presidents, Carl Tombo, '02S.; William James Johnson, '78L., H. H. Huffaker, 1902L., Muir Weissinger, '94L.; secretary and treasurer, Franz A. Busse, '03S. (address, 900 Third Avenue). On March 6 the first dinner was held at the Galt House, Louisville, Ky. Mr. Geo. G. Briggs acted as toastmaster. Many speeches were made and a telegram of congratulation from President Butler was read.

Class of '76, College

The Class of '76 held its annual reunion at the Hotel Seville on April 16. The reunion was in commemoration of the approaching thirtieth anniversary of the graduation of the Class. The following members of the Class were present: Messrs. Arrowsmith, Bangs, Dugro, Drisler, Ely, Goodwin, Holden, Ivey, Jones, Kent, Lozier, Page, Rankin, Raegener, Reed, Renwick, E. Seligman, I. N. Seligman Smith, Sprague, Thayer, Throop, Townsend, Verplanck and Williams. Letters of regret were received from Messrs. Embury, Hyde, Livingston, Morrow, Oakes, Pratt, G. W. Seligman, von Sachs and Wyatt. Every member of the Class responded except Mr. Johnson, whose letter arrived too late to be read at the reunion. Messrs. Johnson and von Sachs are still residing in Europe. Mr. Morrow has become a professor at Fisk University, Nashville, Tenn. The other members of the Class are still engaged in the same vocations as at the last reunion. Since the reunion held five years ago at the Hotel Savoy, two members of the Class, Messrs. Bates and Calman, have joined the silent majority.

Dean Van Amringe, the only professor now connected with the College who was a professor when the Class graduated, was a guest of honor. He made a happy address upholding College associations, and maintaining that the College was largely dependent for its future support upon the loyalty of its alumni. Messrs. Ely, Thayer, Arrowsmith, Reed and Smith also spoke. The Class poem, composed by Mr. Johnson for the Classday held in June, 1876, was read by Mr. Sprague.

The Class were the guests of Mr. L. C. Raegener, who regularly attends all the reunions. College songs enlivened the occasion, one of which was a parting song composed by Mr. Hyde for the Classday in 1876. A better spirit of good fellowship on the part of all the members of the Class was never exhibited than at this reunion.

Class of '88, College

The twenty-second annual dinner of the class of '88, College, was held at the Hotel Cumberland on February 24, and was attended by the following members: Aitken, Andrews, Ayrault, Bogert, Dodge, Goeller, Kane, Moore, Powell, Sill, Sutphen, Villaverde, West, Woodward and Young. The annual reunion of the Class will be held on the afternoon of commencement day in East Hall as usual.

Class of '99, College

The next reunion of the Class of '99, College, is scheduled for the afternoon and evening of commencement day, June 13, 1906. The Class will assemble as in previous years at the alumni luncheon, and after attending the alumni meeting will adjourn to a room in East Hall, after which a baseball game will be played. In the evening the commencement dinner will be held.

A meeting of representatives from the classes of '99 Science, and '99 College, was recently held at the Columbia University Club to discuss the feasibility of having a joint reunion. The College was represented by Messrs. T. Parsons, Hackett, Fowler, Cardozo, Eldert and J. S. Harrison. H. C. Carpenter represented the electrical engineers, H. H. Oddie and H. Von Baur the civil engineers, Myron K.

Falk the mining engineers, and Howard Chapman the architects. It was decided that the Science men should join informally with the College alumni at the coming commencement reunion, and that both classes should hold a joint reunion in December, 1906. This will be the first general gathering of both College and Science since undergraduate days.

Kellogg was married to Miss Mary Hall of Ogdensburg, N. Y., on April 28, 1906, in that city.

Class of 1902, College

For the third time the Class of 1902 has suffered the loss of a member by death. On November 26 last, Clarence Whittemore Bartow, while substituting as surgeon on an ambulance call from Roosevelt Hospital, where he was serving as interne, was fatally injured in a collision between the ambulance and an automobile. At the time of his death, Dr. Bartow was in his twenty-sixth year. He was a graduate of P. and S., and a member of the Psi Upsilon fraternity.

On March 3, 1906, the Class held a reunion and dinner at the Arena. The feature of the evening was the presentation of a silver loving cup to the Class Boy, Alfred Thayer Mahan, 2d, who was represented by his father. The occasion was celebrated by an appropriate ode from Kelly. The following men were present: G. C. Atkins, Bradley, Budington, Bullard, Carey, Clark, Fitch, Gerster, Glenney, Halstead, Harper, Hincks, Holland, Hutton, Jackson, Kelly, Mahan, Meeks, Nesbit, Parr, Pell, Prince, Ryttenberg, Spencer, St. John, Stratford, Strebeigh, West, Willis, Winslow, Wise, and Wooster. Regrets were received from Colie, Danton, Halsey, Hogan, Hopkins, Iglehart, La Roche, Lawson, Lee, McClure, Stern, and Yohannan.

Both Wilson and Tinker are married. Lockwood is the father of a boy. Meyers has resigned as secretary of the Columbia Committee on Employment in order to take up a position with the New York Telephone Company.

Class of 1904, College

Business, law, medicine, the ministry, teaching, study, engineering, literary work, and "the army" are,

broadly speaking, the professions and lines of work which are being followed by the members of the Class of 1904.

The greater number are engaged in business, to wit: Abeles, Akin, Bates, Bloomfield, Brace, Carlsson, Carpenter, Dargeon, Deyo, Earle, Elgas, Fisher, Geer, Gillet, Goldberger, Green, Gutman, Hammerslaugh, Haneman, Harcourt, Hedinger, Henberg, Hughes, Kahn, Landauer, Lange, Lyford, McDonald, Muller, Munker, O'Connel, Robinson (A.F.), Scharpes, Selvage, Stein, Thurber, Tice, Toy, Van der Burgh, Van Ness, Verplanck, Vogel, Warren, Weissman, and Whitaker, a total of forty-five names.

Thirty-three are studying or practicing law, the majority being students in the Columbia Law School. Those who have chosen law as their profession are Blake, Bovey, Bryant, Bulkley, Butler, Davis, Duell, Elgar, Ellis, Fried, Goldfrank, Grovenhorst, Harris, Houston, Kilroe, Loening, McAneny, Malmbergy, Newburger, Otto, Robinson (J.L.), Seggel, Stauffen, Stephenson, Sweeney, Swortfiguer, Updike, Von Bernuth, Wallach, Waltz, Willcox, Wilson, and Wupperman.

Seventeen men are engaged in graduate work along special lines or in preparation for or active work in teaching. They are Aery, Banning, Beha, Burchell, Elsworth, Hayes, Hurley, Jacobstein, Knox, Lance, Lawton, Moeler, Myers, Rodman, Speck, Whittin, and Woodard.

The medical profession has been chosen by Foucar, Funk, Hill, Leber, Lindsay, Maeder, Oppenheimer, Ottenberg, Trotter, and Wile.

Following the ministry or engaged in Christian work of some character are Allen, Fish, Inman, Knauff, Krusa, Pettus, and Stray. Under the Columbia science faculties are Forbes, McKinney, and Pitou in civil engineering, Gay and Kreuder in electrical engineering, and Jacobs and Jouard in chemistry. Literary work is engaging the attention of Boyesen and Seymour, while Mettler, who entered West Point during his Sophomore year, will, in June, enter the United States army as a second lieutenant.

During 1905 and 1906 a number of class reunions and a class dinner have been held, the latter at the "Arena"

on March 17, 1906. The class "Bulletin," which is to be issued annually as a record of class activities, has made its first appearance. A committee has been appointed from the Class to arrange plans for the commencement day reunion, dinner, etc., and it is hoped that every 1904 man will do his best to be present.

Class of 1905, College

Since its graduation, the Class has held a meeting and smoker at the Columbia University Club on March 2, 1906. The first reunion dinner will take place on commencement day at the University.

The officers of the Class are: Duncan H. Browne, president; Chalmers Wood, Jr., vice-president; Norman W. Van Nostrand, secretary, and G. Adolphus Younger, treasurer.

Faculty Club

The following constitution was adopted by the Faculty Club on February 9, 1906:

ARTICLE I

Name and Object

This association shall be known as "The Faculty Club of Columbia University." Its object shall be to support and maintain South Hall or any other building or rooms which may in the future be assigned to the officers of the University for the general purposes of a club, and to promote the interests of the University through a closer association and cooperation of its officers and others concerned in its welfare.

ARTICLE II

Membership

Section 1. All officers of the University may become members of the Club by vote of the executive committee. Graduates and other friends of the University who have been nominated by two members may also be elected to membership by the executive committee.

Section 2. The regular dues shall be ten dollars per annum, the fiscal year to date from the opening of the academic year. Special provision may be made by the executive committee

for the admission of members for half a year or less at one-half the regular rate.

ARTICLE III

Officers

Section 1. The officers of the Club shall be a president, a secretary and a treasurer who shall be elected annually, and an executive committee composed of the president, secretary and treasurer, *ex-officio*, and six elected members whose term of office shall be three years, except that of those chosen at the first election two shall serve for the period of one year only and two for the period of two years and that any one elected to fill a vacancy shall serve only for the unexpired term of the member in whose place he is chosen. All officers shall hold office until their successors are elected.

Section 2. The president shall preside at all meetings of the Club. He shall also be chairman of the executive committee and shall perform such other duties as the committee or the Club may assign to him.

Section 3. The secretary shall keep the minutes of the meetings of the Club and of the executive committee, shall notify members of their election, issue notices for all meetings of the Club and of the executive committee, conduct the correspondence and keep the records, which records and correspondence shall be open to the inspection of members at all reasonable times.

Section 4. The treasurer shall receive and have the custody of the funds of the Club and shall disburse the same subject to the rules and under the direction of the executive committee. He shall report at every annual meeting and oftener if required. His accounts shall be audited by a committee elected for the purpose at the annual meeting.

Section 5. The executive committee shall have general charge of the affairs, funds and property of the Club. It shall be its duty to carry out the objects and purposes of the Club and to this end it may exercise all the powers of the Club subject to the constitution and the direction of the Club. The executive committee shall also pass upon all applications for membership and may, for reasons satisfactory to

itself, withdraw the privileges of membership from any member, subject, however, to appeal to the Club.

ARTICLE IV

Meetings

The Club shall meet annually at a time and place to be determined by the executive committee for the election of officers and the transaction of such other business as the committee may determine. Special meetings may be held at any time on the call of the executive committee or at the written request of ten members on the call of the secretary. At least three days' notice of any meeting shall be given to each member of the Club. Twenty-five members shall constitute a quorum at all regular and special meetings and a majority vote of those present and voting shall control its decisions.

ARTICLE V

Amendments

This constitution may be amended at any annual or special meeting of the Club by a majority of the members present and voting, but all amendments to be proposed at any meeting shall first be referred to the executive committee for consideration and shall be submitted to the members of the Club at least three days before such meeting.

Sigma XI

At the regular annual meeting of the Kappa chapter of the Sigma Xi, held April 11 in the rooms of the Faculty Club, the following men, who had been previously elected, were initiated into the Society: Morton Arendt, '98S., William Nathan Berg, 1904S., Thomas Clachar Brown, A.M. 1905, Albert Herman Case, 1905S., John Adams Church, Jr., '67S., William Scofield Day, '84C., Clarence Gibson Dresser (P.), Alfred Winter Evans, 1906S., Albert Hill Fay, 1906S., James Kip Finch, 1906S., Mico Miltiades Fontrier, 1905C., Mortimer Freund, 1906S., Frazer Walker Gay, 1906S., Frederick Edward Gibert, Jr., 1906S., Russell deCosta Greene, 1906S., Edward Hess, 1906S., Arthur Michael Johnson, '77L., Herman Norton Johnson, 1906S., Lee Olds Kellogg, 1906S., Edward Frank Kern, Ph.D., 1901, Otto

Kress, 1906S., Maurice Allison Lamme, A.M. 1904, Francis Church Lincoln (P.), Charles Edward Lucke, Ph.D. 1902, Arthur J. Mettler, 1905S., Charles Virgin Morrill, Jr. (P.), Charles Edward Morrison, 1901S., Leighton B. Morse (P.), Charles Budd Robinson (P.), William Salant, '99(P. and S.), Harvey Ambrose Seil, 1903C., Frank Houghton Sewall, 1902C., Isadore Tanz, 1906S., Roger Walcott Toll, 1906S., William Erastus Upham (Ph.), Harold Worthington Webb, 1905C., William Henry Welker (P.), Albert Potter Wills (Adj. Prof. Mech.), John Howard Wilson (P.), Leon Elmer Woodman (P.), and Harlan Harvey York (P.).

Besides a great many active members of the chapter, there were present Professor Nichols of Cornell, president of the fraternity at large, Professor Tracy, from the Yale chapter, and Professor Marburg, from the University of Pennsylvania.

Ph.D. Notes

1884.—Charles Edward Munsell has contributed a number of articles to the *Journal of the American Chemical Society*, and has furnished mortality statistical charts for 1876, 1877, 1878, 1879 and 1880 for the annual reports of the New York City Health Department for those years, as well as a report on "Milk, fresh and condensed," and a "Complaint against the Glen Cove Manufacturing Co." for the fourth annual report of the State Board of Health of New York.

1887.—Richard Moldenke is secretary and treasurer of the American Foundrymen's Association and editor of the transactions of the Association; he is a member of the Government advisory board on fuel and structural material tests, and an honorary member of the British Foundrymen's Association; he was a member of the jury of awards at the St. Louis Exposition, and has written a number of technical articles for the engineering magazines and iron trade journals.

1895.—Percival Menken is editor of the Civil Procedure Reports, trustee and secretary of the Board of the Jewish Theological Seminary, and a contributor to the Jewish Encyclopedia.

1897.—Francis R. Stark is professor of quasi-contracts in the faculty of law of Fordham University and is preparing the article on "Telegraphs and telephones" for the Encyclopedia of Law and Procedure.—Ansel A. Tyler has recently had his title changed to professor of biology and geology, Bellevue College, Bellevue, Neb.

1898.—P. A. Rydberg is curator of the New York Botanical Garden; he is a regular contributor to the *Bulletin of the Torrey Botanical Club*, and has in press a volume on the flora of Colorado.

1899.—Shepherd I. Franz, pathological physiologist, McLean Hospital, Waverly, Massachusetts, has published "Studies of feeble-mindedness" and "Reduction of an aphasia" in volume 2 of the *Journal of Philosophy, Psychology, and Scientific Methods*, and "Effects of exercise upon the retardation in conditions of depression," and "The time of some mental processes in the retardation and excitement of insanity," in recent issues of the *American Journal of Insanity*.—Allen Johnson, professor of history and political science in Bowdoin College, recently published an article on "Illinois as a constituency in 1850" in the *Iowa Journal of History and Politics*. He will contribute the volume on Stephen A. Douglas to the American Crisis Biographies series now in course of publication.

1900.—George T. Flom is head of the department of Scandinavian languages and literatures at the State University of Iowa and also has charge of the department of Scandinavian in the *Journal of English and Germanic Philology*. During the past few years he has contributed a number of articles and reviews to the latter publication, as well as to the *Modern Language Notes*, *The American Anthropologist*, *Scandia*, the *Iowa Journal of History and Politics*, and *Dialect Notes*. A second edition of Wichert's "*Als Verlobte empfehlen sich*," edited by him, has just been published by D. C. Heath & Co. Last year the John Anderson Publishing Co. of Chicago, Ill., published for him a college edition, with notes, vocabulary and literary introduction, of Björnson's "*Synnöve Solbakken*."

1900.—Wm. Chamberlain, who was president of Vellore College in India from 1900 to 1905, is now professor of logic and mental philosophy in Rutgers College.—Louis Gray published during the current academic year a study of "The Jews in Pahlavi literature" in the *Actes du xiv^e Congrès International des Orientalistes*, I, 177-192.—R. R. Reeder since taking his degree has been superintendent of the New York Orphanage and is now contributing to *Charities* a series of articles on the subject of "Training children in institutions."

1901.—A. Cleveland Hall, head of the department of economics and sociology at Kenyon College, has a chapter in Professor Carver's new book on "Sociology and social progress."—Isidor Loeb is now professor of political science and public law in the University of Missouri.—Herbert R. Moody has left Hobart College to accept the position of assistant professor of analytical chemistry in the College of the City of New York.

1903.—Louis Nathaniel Chase, of the department of English of Indiana University, has recently published two articles in the *New York Times Saturday Review*, one on Woodberry's "Swinburne," and the other on "Poetic expression of motherhood."—W. F. Hand, of the Agricultural College of Mississippi and State chemist, has recently published with Professor M. T. Bogert of Columbia, two articles in the *Journal of the American Chemical Society*.—Richard S. Lull, of the Massachusetts Agricultural College, has been elected assistant professor of vertebrate paleontology and associate curator of this branch of the museum at Yale University.—James Burt Miner, of the State University of Iowa, will migrate to the University of Minnesota next autumn, where he has been appointed assistant professor of psychology.

1905.—Jesse D. Burks has, during the past six years, published the following educational writings: "The rational study of English literature," *Journal of Proceedings, Southern Cal. Teachers Assoc.* (1900); "The practical value of teaching agriculture in the public schools," *Proc. Nat. Educ. Assoc.* (1902); "History of the Speyer

School: The environment of the Speyer School," *Teachers College Record* (1902); "The Speyer School building: Practical work for graduate students of education," *same* (1903); "The Speyer School of Teachers College," *COLUMBIA UNIVERSITY QUARTERLY* (1903); "Social standards in the teaching of elementary arithmetic," *Proc. N. J. State Teachers Association* (1904); "Philosophy and science in the study of education," *Univ. of Cal. Publ.* (1905); "Relation of theory to practice in the training of teachers," *Proc. N. Y. State Teachers Assoc.* (1905); "Exact standards in city school administration," *Columbia Univ. Contrib. to Educ. and Phil.* (1906).—Frederick M. Davenport, professor in political science, Hamilton College, is a member of the executive committee of the American Sociological Society, and published in 1905 his monograph on "Primitive traits in religious revivals."—Roland M. Harper is engaged on a piece of botanical work for the geological survey of Alabama.—J. L. Meriam, of the University of Missouri, published in September, 1905, his monograph on "Normal school education and efficiency in teaching."—S. T. Tamura was for two years an assistant in the department of terrestrial magnetism of the Carnegie Institution and is now mathematician of

the department. He has been elected to full membership in the Philosophical Society of Washington, and read a paper before the society on the "Temperature of the air near the earth's surface," in May, 1903. He has furnished a number of articles on various technical subjects to the *Monthly Weather Review*; in February of this year he contributed an article to the *Popular Science Monthly* on "Recent advances in meteorology and meteorological service in Japan," and a recent issue of *Science* contains an article by him on "Japanese meteorological service in Korea and Manchuria." He has besides published a number of articles in Japanese.—Lorande Loss Woodruff is an instructor in biology at Williams College, and during the summer months is engaged at the Wood's Hole Biological Laboratory as instructor in zoology. He is a fellow of the American Association for the Advancement of Science and a member of the Society for Experimental Biology and Medicine. His publications include "An experimental study on the life-history of hypotrichous infusoria," *Journal of Experimental Zoology*, 1905; and "Physiological and morphological changes during 860 generations of *Oxytricha fallax*," *Proc. Am. Assn. Adv. Sci.*, 1905.

NECROLOGY*

BALLERAY, John Joseph, LL.B. 1874, died on Feb. 17, 1905.

BARRETT, Thomas William, M.D. 1897, died at Portland, Ore., on Feb. 19, 1905.

BELL, James, LL.B. 1867, died on July 6, 1901.

BENJAMIN, Edward Wade, LL.B. 1888, died on Dec. 19, 1903.

BENJAMIN, William Herbert, A.B. 1862, died on Oct. 5, 1905.

BIRNIE, Thomas Noyes, M.D. 1882, died at Orlando, Fla., on Feb. 26, 1906.

* This list includes the names of all Columbia men who have been reported as having died between February 15, 1906, and May 15, 1906, as well as those whose decease has not been previously reported in these columns.

He received the degree of A.B. from Yale University in 1876.

BLOOMFIELD, Charles Smith, LL.B. 1876, died in Dec., 1904.

BLOOMFIELD, Thomas Blanch, M.D. 1876, died at Westbrook, Conn., on Feb. 17, 1905, aged sixty years.

BOARDMAN, Clarence Ide, LL.B. 1903, died at Glens Falls, N. Y., on Dec. 1, 1905.

BRACE, Harry Martin, M.D. 1884, died at Perth Amboy, N. J., on Feb. 19, 1906. He was a surgeon for the New Jersey Central R. R.

BRUNER, Edward Thomas, LL.B. 1904, died on Nov. 1, 1905, aged twenty-two years. He was a member of the firm of Bruner and Carleton, New York.

CALDERWOOD, Harvey Scott, M.D. 1870, died recently.

CAMERON, William Murdock, M.D. 1873, died at Halifax, Nova Scotia, on Jan. 24, 1906.

CARTER, Theophilus Ransom, M.D. 1890, died on Jan. 23, 1906. He received the degree of A.B. from Yale University in 1886.

CHURCH, Francis Pharcellus, A.B. 1859, died in New York City on April 11, 1906. Mr. Church had been interested in the management of the old *Galaxy Magazine*, the *Army and Navy Journal* and the *Internal Revenue Record*. He was for many years an editorial writer on the *New York Sun*.

COMSTOCK, James Clinton, M.D. 1884, died at Binghamton, N. Y., on March 7, 1905, aged forty-seven years.

COMSTOCK, Seth Cook, M.D. 1894, died in New York City on March 27, 1906, aged thirty-five years.

CRISFIELD, James Edwin, M.D. 1873, died at Dansville, N. Y., on Feb. 21, 1904.

CROFTON, Joseph Richard, M.D. 1889, died on Jan. 29, 1906.

CURRAN, John Dickinson, M.D. 1901, died of typhoid fever at St. Augustine, Fla., on April 7, 1906. He received the degree of B.S. from Cornell University in 1897.

DOWNS, Roscius Youngs, M.D. 1886, died at Ansonia, Conn. on April 1, 1906, aged forty-eight years. He received the degree of A.B. from Williams College in 1883.

DWIGHT, Edward Foote, LL.B. 1889, died at Colorado Springs on Jan. 25, 1903. He received the degree of B.L. from the University of Wisconsin in 1887.

EASTMAN, Frank Gaylord, M.D. 1890, died of pneumonia on Feb. 8, 1904. He was medical examiner for the towns of Warwick and East Greenwich, R. I.

ELLIS, Herbert Henry, M.D. 1898, died on April 28, 1905.

EVANS, Thomas Grier, LL.B. 1876, died on March 28, 1905. He received the degree of A.B. from Yale University in 1874.

FEATHERSTONHAUGH, James Duane, M.D. 1870, died at Cohoes, N. Y., on Oct. 21, 1905. He received the degree of A.B. from Union College in 1867 and that of A.M. in 1870.

FOSTER, Addison Howard, M.D. 1866, died on March 3, 1906, at Oak Park, Ill. He received the degree of A.B. from Dartmouth College in 1863 and that of A.M. in 1883.

FOSTER, Charles Augustus, M.D. 1870, died on Feb. 21, 1906, aged sixty-four years.

FRANKLIN, Gustavus Scott, M.D. 1862, died on Feb. 4, 1901. He received the degree of A.B. from Marietta College in 1859 and that of A.M. in 1862.

GALBRAITH, Franklin Benjamin, M.D. 1861, died on Feb. 23, 1903.

GALE, Alexander Fryer H., M.D. 1887, died at sea on March 17, 1905.

GARRISON, Charles Miller, M.D. 1884, died at Salt Lake City, Utah, on March 26, 1904.

GLASSFORD, Robert Winning, M.D. 1878, died at Roosevelt Hospital, New York, on Oct. 18, 1905, aged fifty-two years.

GRIFFITH, John Martin, a member of the class of 1906, Law, died on April 20, 1906.

GRIFFITHS, William Edward, M.D. 1868, died in Brooklyn on Feb. 21, 1905, aged sixty-three years.

GRINDAL, Herbert White, LL.B. 1882, died in Feb., 1906. He received the degree of B.S. from Bowdoin College in 1880.

HANMORE, Louis Eugene, M.D. 1884, died at Newburgh, N.Y., on Sept. 19, 1905.

HARRIS, Hatton Thompson, M.D. 1885, died in the Navy Hospital at Pensacola, Fla., on May 19, 1905, aged forty-three years. He was assistant surgeon in the United States Navy.

HEDGES, Joseph, M.D. 1859, died at Newton, N. J., on April 14, 1906, aged seventy-eight years.

HENRY, John Powell, M.D. 1881, died at Jersey City, N. J., on March 16, 1906, aged forty-eight years.

HIBLER, George Hunt, M.D. 1904, died of pneumonia in Morristown, N. J., on March 30, 1906.

HOWE, Edwin Jenkins, M.D. 1873, died at Newark, N. J., on March 14, 1905, aged fifty-six years. He received the degree of A.B. from Wesleyan University in 1870.

HOXIE, Nathaniel Blossom, A.B. 1830, A.M. 1842, died recently.

HUNT, Ezra Mundy, M.D. 1852, died about July 1, 1904.

IRVING, John Treat, A.B. 1829, died in New York City on Feb. 27, 1906, aged ninety-four years. Mr. Irving was one of the oldest university graduates in the country and was a nephew of Washington Irving. He was known not only as a lawyer but also as an author, and was a member of the Authors' Club, the Century Association and the St. Nicholas Society.

JOHNSON, Joseph, M.D. 1866, died at New Richmond, Wis., on Feb. 17, 1905, aged eighty-two years.

JONES, Walter R. T., A.B. 1850, died on March 26, 1906, aged seventy-six years. He was a member of the Bar Association, the Union League Club, the Down Town Association, the University Club, the Chamber of Commerce, the Society of Naval Architects, the Marine Engineers, the Seawanhaka-Corinthian Yacht Club, the St. Nicholas Society, the American Geographical Society, and a director of the New York Botanical Garden.

JOSLYN, Charles Swift, LL.B. 1867, died of heart failure at his home in Kenwood, N. Y., on Jan. 1, 1906.

KETTELL, Herbert, A.B. 1860, A.M. 1863, died on May 2, 1904.

KISSAM, Daniel Embury, M.D. 1848, died on Dec. 23, 1903, at Huntington, N. Y., aged eighty-seven years.

LANDON, Newell Egbert, M.D. 1876, died on Feb. 9, 1906, aged fifty-four years.

LEWIS, Theodore Frelinghuysen, A.B. 1848, died on Dec. 26, 1903.

LUMSDEN, Robert Campbell, M.D. 1881, died in May, 1904, at Rockaway, N. J., aged forty-four years.

MCKENZIE, William Valentine, Jr., M.D. 1884, died at Metuchen, N. J., on Feb. 14, 1906.

MACMARTIN, Daniel MacIntyre, M.D. 1877, died at Spokane, Wash., on Feb. 2, 1906, aged fifty-two years.

MAHONEY, William, M.D. 1891, died in New York City on Nov. 16, 1905, aged forty-seven years.

MATHEWSON, Earl, M.D. 1879, died at Durham, Conn., on July 6, 1905, aged fifty-five years.

METCALF, George Reuben, M.D. 1874, died at Orvieto, Italy, on Feb. 28, 1905. He received the degree of A.B. from Amherst in 1872.

MILLER, Norman Rogers, M.D. 1882, died at Westboro, Mass., on Feb. 3, 1906.

MOORE, Ralph C. B., a member of the class of 1907, College, died at Chatham, N. J., on Feb. 28, 1906, aged twenty-four years.

NOTT, Thomas Heath, M.D. 1880, died at Goliad, Texas, on Dec. 29, 1905.

OSBORN, Edward, M.D. 1886, died at Easthampton, N. Y., on Dec. 4, 1905, aged seventy years.

PARKER, Francis Eyre, LL.B. 1880, died during the spring of 1905. He received the degree of A.B. from Princeton University in 1877 and that of A.M. in 1880.

PARKER, Wayne Dee, a member of the class of 1906, Law, died of tubercular meningitis at St. Luke's Hospital on Feb. 27, 1906.

PAULMIER, Frederick Clark, Ph.D. 1900, died at Madison, N. J., on March 4, 1906. Dr. Paulmier was an assistant in zoology in the year 1900-01. From the time of his leaving Columbia until the illness which caused his death, he was connected with the State Museum at Albany.

PAYNE, William Anderson, M.D. 1899, died of heart disease at San Antonio, Texas, on Jan. 10, 1906.

PEARSALL, Andrew T., M.D. 1861, died at Owego, N. Y., on Nov. 17, 1905, aged sixty-six years.

PIERCE, Andrew Martin, M.D. 1873, died at New Bedford, Mass., on Nov. 6, 1905, aged fifty-three years.

PRENDERGAST, John Joseph, M.D. 1868, died in Brooklyn on March 1, 1905, aged fifty-eight years. He received the degree of A.B. from Seton Hall College in 1879.

REED, William Henry, LL.B. 1886, died on July 21, 1904, aged forty-one years. He received the degree of A.B. from the College of the City of New York in 1884, and was a member of the Alpha Delta Phi fraternity and of the New York Bar.

REYNOLDS, Edwin, M.D. 1877, died in Brooklyn, N. Y., on Dec. 14, 1905, aged sixty years.

RING, Charles Augustus, M.D. 1873, died about two years ago. He received the degree of A.B. from Bowdoin College in 1868 and that of A.M. in 1871.

ROSENTHAL, Abraham, M.D. 1890, died at Farmington, N. M., on Jan. 20, 1906. He received the degree of A.B. from the College of the City of New York in 1887 and was Superintendent of Schools at San Juan, Mexico.

ROTHE, Henry Emory, M.D. 1880, died of cerebral apoplexy at Harrison, N. J., on March 4, 1906, aged sixty-six years.

ROYALL, Edson Davidge, M.D. 1904, died at Lebanon, Conn., on Nov. 28, 1905, aged thirty years.

RUBLEE, Charles Clark, M.D. 1873, died at Morrisville, Vt., on Sept. 11, 1905, aged fifty-three years.

RUGGLES, Henry Joseph, A.B. 1832, died during 1906, aged ninety-two years. Mr. Ruggles retired from the profession of law in 1866 and devoted himself to literary criticism and the study of Shakspeare. He published several noteworthy brochures. He took a prominent part in the political life of New York during the early years of his life and the city is indebted to him for many public improvements. The setting aside of Union Square and of Gramercy Park for park purposes was due to his efforts.

RUSSELL, Israel C., a member of the class of 1875, Science, died on May 1, 1906, at Ann Arbor, Mich., aged fifty-four years. He received the degree of doctor of laws from the University of New York in 1897. In 1875 he was appointed assistant professor of geology in the Columbia School of Mines and in 1880 he became assistant geologist and later geologist of the United States Geological Survey. In 1892 Professor Russell accepted the chair of geology in the University of Michigan, which he held up to the time of his death. He wrote many stories of his various trips and explorations and was a frequent contributor to the magazines.

SCHIFF, Herman James, M.D. 1884, died at Alexandria Bay, N. Y., on July 24, 1905.

SIMPSON, Edwin Daniel, M.D. 1874, died in New York City on June 23, 1905, aged fifty-two years.

STEGER, Robert William, M.D. 1878, died at the Bellevue Hospital, New York, on Jan. 10, 1906, aged forty-eight years.

STEWART, James Fleury, M.D. 1900, died at the Smith Infirmary, Staten Island, N. Y., on Dec. 11, 1900.

SWAN, William Edward, M.D. 1890, died in New York City on Feb. 4, 1906.

TANSLEY, John Oscroft, M.D. 1877, died in New York City on March 26, 1905, aged sixty years.

TERRILL, Thomas, M.D. 1867, died in New York City on Feb. 22, 1905. He was coroner of Union County, New Jersey.

TOPPAN, Robert Noxon, LL.B. 1861, died of heart disease at Cambridge, Mass., on May 10, 1901, aged sixty-four years. He was a member of the American Philosophical Society, and of the Massachusetts Historical Society.

TUBBS, George Waite, LL.B. 1876, died on Feb. 17, 1905.

VALENTINE, Herbert, LL.B. 1876, died on Sept. 29, 1905.

VAN BLARCOM, George Green, A.B. 1883, died on March 10, 1906.

VAN DALSEN, Spencer, M.D. 1876, died at Paterson, N. J., on Feb. 17, 1905, aged fifty-two years.

VAN GIESON, Henry Clay, M.D. 1866, died on March 7, 1905, aged sixty-five years. He received the degree of A.B. from New York University in 1861 and that of M.D. from Georgetown College in 1864. Dr. Van Gieson was professor of physiology at the Omaha Medical College.

VAUGHAN, Julius, M.D. 1860, died at Springville, Mich., on Sept. 17, 1905, aged seventy-two years.

WACKERHAGEN, George, M.D. 1869, died at Brooklyn, N. Y., on July 25, 1905, aged fifty-nine years.

WARD, Charles Henry, A.B. 1851, A.M. 1854, died recently.

WESTFALL, E. Jansen, M.D. 1871, died on Feb. 18, 1906, at Rahway, N. J., aged fifty-nine years.

WHITFIELD, Charles Boaz, M.D. 1871, died at Demopolis, Ala., on March 1, 1906, aged sixty-seven years. He received the degree of A.B. from the University of North Carolina in 1858 and that of A.M. in 1861.

WILCOX, William Payne, M.D. 1883, died on Jan. 13, 1902, aged thirty-nine years. He was practising medicine at the time of his death in Nebraska City, Neb.

WILLIS, Sidney Schanck, M.D. 1890, died at Appleton, Wis., on Oct. 14, 1903.

WRIGHT, Albert Allen, Ph.B. 1875, died at Oberlin, O., from acute peritonitis on April 2, 1905. He had held a chair at Oberlin College for thirty years and was a fellow of the Geological Society of America.

ZABRISKIE, Fred Templeton, A.B. 1893, M.D. 1895, died in Nov., 1905.

STUDENT LIFE

Nearly all the work of the undergraduate organizations has now been completed, and a year during which much has been accomplished is at its close.

Among the speakers at **Kings Crown** were Messrs. F. Hopkinson Smith, Norman Hapgood, and Hamlin Garland. At the last meeting held on May 3, the following officers for 1906-7 were elected: President, W. G. Palmer; faculty vice-president, Professor Odell; senior vice-president, H. T. Aplington 1907; treasurer, S. L. Pierrepont 1907; secretary, H. E. Chapin 1907; manager of the Varsity Show, W. H. Bosworth 1907 S; members of council, J. W. Brodix, G. Norris, H. Perrine. At this meeting it was voted to give to the newly organized **Dramatic Association**, formed of the eleven upperclassmen in this year's cast, the control of the Varsity Show, except that the manager be elected by the student body after having been approved by the Association. This action was taken at the distribution of the profits of *The Conspirators*, this year's show, which amounted to over \$1400. This musical comedy, which ran at Carnegie Lyceum during the week of March 11, was a decided artistic success, thanks to the clever coaching of Mr. Lewis Hooper.

Social life at the University has benefited by the **University Teas** given until April every Tuesday afternoon. Among the guests on these occasions were Mr. and Mrs. Joseph H. Choate, Bronson Howard, Kate Douglas Wiggin, Dr. Henry Van Dyke, Mark Twain and Sir Caspar Purdon Clarke. The **Junior Ball**, held at Delmonico's on February 23, was the social event of the year. S. L. Pierrepont, 1907, acted as chairman of the committee and J. W. Brodix, 1907, was manager.

Among the departmental societies, the **Deutscher Verein** has succeeded admirably this year with its biweekly meetings. Toward the latter part of April a *Kommers* was held in honor of Dr. Ludwig Fulda, the German playwright, and proved a complete success. New officers for 1906-7 have been

elected as follows: President, Professor W. H. Carpenter; vice-president, Dr. A. F. J. Remy; chairman executive committee, A. W. Porterfield, Ph.; secretary, R. S. McElwee 1908; treasurer, H. C. Betjemann 1907; members of the executive committee, W. M. Schwarz 1907, W. M. Carpenter 1907, R. G. Conried 1907.—The **Société Française** has been holding good meetings through the year. It presented as its annual production Molière's *Les Fourberies de Scapin* on April 20 and 21. The officers for 1906-7 are: Honorary president, Professor A. Cohn; president, H. E. Clarke 1907; vice-president, R. de la Bouglise 1907 S; secretary, C. B. Spencer 1907; treasurer, H. C. Olinger 1908.—The **Circulus Latinus** has finished successfully its first year of existence and appears to have a future.—The **Electrical Engineering Society** has heard lectures from Messrs. H. D. Hawks and H. M. Cogan on subjects kindred to the studies of the department, and closed its season with a well-attended smoker.

Of the **Publications**, *Spectator* is completing its fourth year as a daily. Its continued progress argues a like advance next year under a newly-elected managing board, consisting of H. T. Aplington 1907, editor-in-chief, H. E. Chapin 1907, D. H. Walbridge 1907, F. Ware 1908, and J. W. Brodix 1907, acting business manager. The *Monthly* has appeared on time every month so far. The *May Jester* is a good example of original literary art and drawing.

On account of resignations, it has been necessary to elect several new men to the 1908 **Columbian** board, and its officers are now as follows: Editor-in-chief, W. L. Wood; business manager, D. Whipple; assistant editor, J. C. O'Mahoney; assistant manager, E. C. Rouse; P. von Saltz, E. V. Watson, advertising managers; J. N. Reid, art editor.

In **Debating**, things have not succeeded as well as in the past. Columbia teams were defeated in the triangular debates on March 9 by Pennsylvania and Cornell. The men who took

part were H. Harper 1907 L (capt.), F. W. Shaw 1908 L, J. M. Wormser 1907, E. W. Leavenworth 1908 L, T. R. Ludlow 1907 L, E. F. Spitz 1907, and as alternates I. Skutch 1908 and R. W. Dox 1907. Columbia sent T. F. Clark 1907 L to the *Central Oratorical League* contest at Delaware, Ohio, but he did not place. This was the initial contest of the League, which is made up of Columbia, Cornell, Chicago, and Ohio Wesleyan. New officers have been elected by *Philolexian* as follows: President, H. E. Chapin; vice-president, W. M. Schwarz; secretary, E. E. Porter; treasurer, P. H. Windels. *Barnard Literary Association* has chosen F. L. Hopkins, president; C. R. Webb, vice-president; A. J. Romagna, secretary; G. W. Jaques, Jr., treasurer. The *Freshman Debating Society* engaged in several contests, losing to the Brown Freshmen and winning from the Sophomores. In the *Curtis Medals* competition, P. Isaka Seme, 1906, received the gold award for "The regeneration of Africa," and M. G. Ellenbogen, 1907, the silver prize for "John Marshall's influence on the Constitution."

The new *Political Club* sent delegates to the White House conference and

helped to organize the intercollegiate league of political clubs, of which it is a member.

The *Class Day* committee has been appointed and is composed of F. Y. Keeler, chairman, W. M. Geer, Jr., C. D. Macdonald, K. M. Spence, C. A. Stewart, H. P. Sturges, and R. W. Macbeth, *ex-officio*. An interesting program is in preparation for commencement week.

The *Musical Clubs* have held several successful concerts, one at Bayonne on February 27, one at Yonkers on March 30, and the annual concert and dance in Earl Hall on May 4. Their season has now been closed. The department of music has held a few concerts of string and chamber music. The *University Chorus* gave its spring concert on May 8. The annual concert of the *Philharmonic Society* was also a success, being held on May 10.

In *University Chess* circles the most important happening has been the presentation of a mahogany chess-table to the Chess Club by Mr. Isaac L. Rice. On this are to be inscribed the names of the successive *University Champions* for many years to come.

H. E. CHAPIN

ATHLETICS

At the conclusion of the *Basketball* season, the University team stood in second place in the intercollegiate league, Pennsylvania having won the championship. The team suffered a disastrous slump after losing the second Pennsylvania game by the close score of 17-15, and were defeated at Princeton 23-19. Braced up by a change in the line-up, it won from Yale, Harvard, and Princeton without much difficulty, and, after losing the second Yale game by 17-15, closed the season by winning from Harvard 22-17. C. W. Cuthell, 1907 L, was elected captain of next year's team, and F. L. Rupp, 1907 S, manager.

Active *Crew* practice is now going on for the intercollegiate regatta at Poughkeepsie, which is to be held this year on June 23. Much enthusiasm was aroused at the crew dinner on February 15, which resulted in getting out

a large squad of men for indoor work. Practice on the river was begun about March 20. A Hudson regatta was held on May 5. Livingston beat Hartley in the dormitory race, and the Junior eight won the interclass championship. The Varsity eight is now rowing as follows: Braun, bow; Roy, 2; M. White, 3; Helmrich, 4; Ferris, 5; Boyle, 6; O'Loughlin (capt.), 7; G. Mackenzie, stroke; Dorsey, coxswain. H. B. Post, 1908 S, this year's captain, was forced to give up rowing, and Captain O'Loughlin was reelected. It is expected that the men will go into quarters at Poughkeepsie about June 5. The Annapolis race was rowed on May 19. On May 12 the Freshmen were defeated at New Haven by the Yale Freshmen by three-quarters of a length.

The *Baseball* team has had a reasonably good season thus far. It took

a southern trip during the Easter holidays, and will start on its eastern trip the first week in June. The scores of the college games played thus far follow:

Columbia, 14; Pratt, 3.
Columbia, 14; N. Y. U., 5.
Columbia, 7; Annapolis, 5.
Columbia, 5; Johns Hopkins, 1.
Columbia, 5; George Washington, 3.
Columbia, 6; Rutgers, 4.
Columbia, 3; West Point, 2.
Columbia, 4; Pennsylvania, 3.
Columbia, 5; Yale, 15.
Columbia, 2; Seton Hall, 3.
Columbia, 2; Syracuse, 6.
Columbia, 0; Cornell, 4.
Columbia, 2; Lafayette, 3.
Columbia, 4; Pennsylvania, 6.
Columbia, 0; Cornell, 4.

The period of indoor **Track** work showed at its close a fair development in the candidates for the team. At the Pennsylvania carnival on April 28 the two mile relay team finished second to Dartmouth, beating Pennsylvania. When the team visited Philadelphia again at the beginning of May, it was swamped in the dual meet by the score of 102-15. The intercollegiate games are to be held this year in the Harvard stadium, and it is doubtful whether a strong team can be entered in these events, as they come in the midst of the final examinations.

The **Hockey** team secured third place in the intercollegiate league, as it has for the last two years, Harvard securing first place. D. Armstrong, 1907 L, is next year's captain, and the management consists of H. T. Aplington, 1907, and H. P. Banks, 1908 (assistant). The Juniors were this year's interclass champions.

Wrestling received much support this year, the team defeating all its opponents except Yale in the dual meets, and tying for second place in the intercollegiate held at the Columbia Gymnasium on April 6. The individual work of Captain J. M. Howell, 1907

S, was especially good.

Though the **Fencing** team secured only fourth place in the intercollegiate meet, it showed fine form in its victories over M. I. T., Pennsylvania, Annapolis, Yale, and Princeton. The interclass competition was won by the Junior team.

The **Lacrosse** season is practically over. Stevens won by 7-2, the up-state trip resulted in defeats by Cornell, 3-0, and Hobart, 4-0, and the closest game was won on May 11 by Harvard on South Field by the score of 3-2.

On account of the loss of most of last year's **Gym** team, the showing in the intercollegiate meet in the gymnasium on March 30 was very poor. Captain C. A. Stewart was the only point-winner, taking the club swinging championship. This gave the local team fifth place, N. Y. U. winning the team championship. The redeeming feature in the preliminary work was the defeat of Pennsylvania by the score of 27-26 in a dual meet.

The **Water Polo** and **Relay Swimming** teams were the winners of many honors during the winter. The former secured third place in the A. A. U. meet in March, but was prevented from taking the intercollegiate championship by a later defeat at the hands of Pennsylvania. The relay team won the championship, however. An aquatic carnival held at the end of April closed the season.

As the **Soccer** schedule was rather incomplete, only two intercollegiate games were played. The Haverford game resulted in a tie and the Pennsylvania game was lost. This put Columbia in third place in the league.

A **Bowling** league was organized with Columbia, Haverford, Lafayette and Pennsylvania as charter members. The championship came to Columbia for the first year.

H. E. CHAPIN

GENERAL CATALOGUE NOTICE

All alumni who have not yet received a return postal-card with reference to the new (1906) edition of the General Catalogue of the Alumni are requested to notify the *Secretary*

of the *Committee on General Catalogue*, Columbia University, New York, and to send him their correct address.

REGISTRATION AT COLUMBIA UNIVERSITY, IN ALL FACULTIES, DURING THE
ACADEMIC YEAR 1905-1906

Faculties	First Year	Second Year	Third Year	Fourth Year	Non-candidates	Graduates	Auditors	Total 1906
Columbia College.....	168	133	115	112	61	—	—	589
Barnard College.....	111	97	78	81	23	—	—	390
Total undergraduates.....	—	—	—	—	—	—	—	979
Faculty of Political Science.....	—	—	—	—	21	174	—	195
Faculty of Philosophy.....	—	—	—	—	22	487	—	509
Faculty of Pure Science.....	—	—	—	—	10	147	—	157
Total non-professional graduate students*	—	—	—	—	—	—	—	861
Faculty of Applied Science.....	139	199	115	94	33	—	—	580
Faculty of Law.....	74	106	93	—	13	—	—	286
Faculty of Medicine.....	80	83	100	152	22	—	—	437
Faculty of Pharmacy.....	94	235	—	—	—	24	—	353
Teachers College.....	28	61	335	275	29	137	—	865
Faculty of Fine Arts { Architecture.....	—	—	66	—	32	9	—	107
{ Music.....	—	—	—	—	27	6	—	33
Total professional students.....	—	—	—	—	—	—	—	2661
<i>Deduct double registration †.....</i>	—	—	—	—	—	—	—	<i>268</i>
Net total.....	—	—	—	—	—	—	—	4233
Summer Session, 1905.....	—	—	—	—	—	—	—	1018
Grand total.....	—	—	—	—	—	—	—	5251
<i>Deduct double registration †.....</i>	—	—	—	—	—	—	—	<i>287</i>
Grand net total.....	—	—	—	—	—	—	—	4964
Students in extension courses §.....	—	—	—	—	—	—	—	2738

* The total 861 does not include 82 college graduates studying under the professional faculties of law, medicine, and applied science, who are also candidates for the degree of A.M. or Ph.D.

† The 268 are distributed as follows: 25 students in Columbia University (19 men and 6 women) and 103 in Barnard College are also enrolled in Teachers College as candidates for a professional diploma; 137 Teachers College students are enrolled in the faculty of philosophy as candidates for the higher degrees (93 men and 44 women); 3 students who graduated from Columbia College in February entered a non-professional graduate faculty.

‡ Summer Session students of 1905 who returned for work at the University during the academic year 1905-1906.

§ Attending at the University, 1,176; attending away from the University, 1,562.

REGISTRATION AT COLUMBIA UNIVERSITY, IN ALL FACULTIES, DURING THE
ACADEMIC YEARS 1898-1906

Faculties	1898-1899	1899-1900	1900-1901	1901-1902	1902-1903	1903-1904	1904-1905	1905-1906
Columbia College.....	403	465	476	492	495	504	534	589
Barnard College.....	202	251	301	339	358	403	366	390
Total undergraduates	605	716	777	831	853	907	900	979
Faculties of Political Science, Philosophy, and Pure Science*	376	442	466	535	623	692	782	861
Total non-professional } graduate students	376	442	466	535	623	692	782	861
Faculty of Applied Science.....	363	414	498	541	638	650	601	580
Faculty of Law.....	349	380	423	440	461	384	341	286
Faculty of Medicine.....	726	787	797	809	795	674	555	437
Faculty of Pharmacy.....	—	—	—	—	—	—	442	353
Teachers College.....	297	391	528	634	633	688	721	865
Fine Arts { Architecture**	96	77	68	85	84	90	78	107
{ Music***	—	—	—	—	—	—	44	33
Total professional students.....	1831	2049	2314	2509	2611	2486	2782	2661
<i>Deduct double registration †.</i>	—	—	105	134	132	196	226	268
Net total	2812	3207	3452	3741	3955	3889	4238	4233
Summer Session.....	—	—	417	579	643	1001	961	1018
Grand net total ‡	2812	3207	3761	4234	4507	4709	4961	4964
Students in extension courses § ...	1173	751	679	900	1196	1590	1886	2738

* Women graduate students registered at Barnard College in 1898 and 1899, but have been included here under the graduate faculties, as they have been so registered since 1900. These figures also include auditors registered in the graduate faculties; these were accounted for separately in all reports previous to 1903; they were abolished in 1905.

** In previous reports architecture was included under applied science.

*** Music was included under Barnard College prior to 1904-05.

† Students in Columbia University and in Barnard College also enrolled in Teachers College as candidates for a professional diploma, Teachers College students enrolled in the non-professional graduate faculties as candidates for the higher degrees, and students who graduated from Columbia College in February and entered a graduate faculty at that time.

‡ Excluding summer session students who returned for work in the succeeding fall.

§ Prior to 1905-06 only such students as were in attendance at the University are included.

COMPARATIVE REGISTRATION FIGURES, NOVEMBER, 1905

Faculties	California	Chicago	Columbia	Cornell	Harvard	Illinois	Indiana	Johns Hopkins	Leland Stanford, Jr.	Michigan	Minnesota	Missouri	Nebraska	Northwestern	Ohio State	Pennsylvania	Princeton	Syracuse	Virginia	Wisconsin	Yale
College Arts, Men.....	532	750	557	694	1898	352	493	188	907	886	470	319	263	368	266	305	249	1213	246	881	1393
College Arts, Women.....	943	893	371	694	356	376	299	—	488	641	843	261	640	463	254	—	—	391	110	653	—
Scientific Schools.....	764	—	566	1499	880	880	—	—	—	1152	576	562	562	—	766	608	624	160	169	1058	—
Law.....	764	133	277	209	709	144	178	—	140	868	455	199	186	214	147	323	—	151	121	277	—
Medicine.....	76	153	424	362	200	540	26	293	68	334	191	94	105	486	—	580	108	65	30	137	—
Graduate Schools.....	271	420	804	200	456	145	—	160	68	123	125	92	93	49	37	287	—	—	—	258	372
Agriculture.....	111	—	—	222	27	350	—	—	—	—	800	97	154	—	—	—	—	—	—	142	—
Architecture.....	12	—	107	81	110	14	—	—	—	—	—	—	—	—	10	123	—	44	—	—	—
Art.....	165	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	107	—	—	49
Dentistry.....	76	—	—	—	86	144	—	—	—	130	181	—	—	391	—	325	—	—	—	—	88
Divinity.....	—	177	—	—	36	—	—	—	—	—	—	—	—	256	—	—	—	—	—	—	—
Forestry.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17	—	—	—	—	—	—
Music.....	—	—	32	—	—	88	—	—	—	—	—	—	—	336	—	38	—	618	—	230	57
Pedagogy.....	—	163	792	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65	85
Pharmacy.....	82	—	353	—	—	172	—	—	—	69	75	—	—	167	59	—	—	—	—	31	—
Veterinary.....	—	—	—	88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Courses.....	—	168	—	199	—	38	—	47	—	82	14	—	200	114	45	691	—	44	—	—	—
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Total.....	3104	2682	4017	3564	4350	3353	996	688	1603	4084	3730	1685	2304	2749	1914	3302	1361	2723	696	2745	3299
Summer Session, '05.....	795	2293	1018	619	1076	423	622	—	33	690	210	396	211	194	296	214	—	88	—	531	288
Deduct Double Registration.....	(268)	(418)	(280)	(312)	(143)	(141)	(241)	—	(30)	(253)	—	(134)	(80)	152	(153)	(86)	—	(35)	—	(193)	(50)
Grand total, 1905.....	3631	4557	4755	3971	5283	3695	1377	688	1606	4521	3940	1887	2635	2791	2057	3430	1361	2776	696	3083	3477
" " 1904.....	3738	4035	4833	3833	5392	3369	1206	740	1424	4000	3886	1704	2728	2856	1758	3027	1385	2307	691	3370	3008
" " 1903.....	3590	4146	4557	3438	6013	3239	1614	694	1370	3926	3550	1540	2513	2740	1710	2644	1434	2207	691	3221	2990
" " 1902.....	3676	4296	4156	3281	5468	—	1648	669	1378	3764	3595	1408	2560	2875	—	2519	1345	2020	—	2884	2804
Officers.....	364	316	573	480	569	396	80	173	145	305	231	148	168	345	160	345	157	207	83	271	414

* Includes schools of chemistry, engineering, mining and related departments.

† Included in college statistics. ‡ Included in scientific schools.

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